RESOURCES

NATURAL

Landslide Map and Inventory, Tilton River–Mineral Creek Area, Lewis County, Washington

by Joe D. Dragovich and
Matthew J. Brunengo

(This report includes soils data and a field form for inventorying landslides.)

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CONTENTS

1 Introduction

3 Appendix I: Landslide inventory field form

11 Explanation of the landslide inventories

19 Appendix II: Focus study area landslide inventory

97 Appendix III: Perimeter study area landslide inventory

143 Explanation of soils data

145 Appendix IV: Soils data

FIGURES

17 Figure 1A. Features of a landslide

18 Figure 1B. Dimensions of a landslide

PLATES (accompany text)

Plate 1. Landslide map of the Tilton River—Mineral Creek area, Lewis County, Washington

Plate 2. Geologic map of the Tilton River—Mineral Creek area, Lewis County, Washington

Plate 3. Modified Varnes classification system (diagram)

LANDSLIDE MAP AND INVENTORY, TILTON RIVER–MINERAL CREEK AREA, LEWIS COUNTY, WASHINGTON

by
Joe D. Dragovich
and Matthew J. Brunengo

INTRODUCTION

Because much of Washington's commercial forest land is in mountainous terrain, that land is susceptible to slope instability of various forms and rates. Improper forest practices (notably those associated with road construction and maintenance and timber harvest) can increase mass wasting on slopes of marginal stability.

Since implementation of the Timber/Fish/Wildlife Agreement in 1987, the Cooperative Monitoring, Evaluation, and Research committee, the Sediment, Hydrology, and Mass Wasting technical steering committee, and the Department of Natural Resources (DNR) have been engaged in cooperative interdisciplinary efforts to study mass erosion on forest lands, improve methods by which it is addressed, and generally reduce the adverse effects of forest practices on slope stability and downstream resources.

As one means of addressing these goals, a Slope-Stability Hazard Zonation Pilot Project was designed and completed using the resources and personnel of both the Forest Practices Division and the Division of Geology and Earth Resources of DNR. The project's broad purposes were to:

(1) complete a landslide inventory of a selected pilot area,
(2) collect topographic, geologic, soils, climatic, and vegetation data relevant to the landslides, and
(3) compare the inventory with the state soil survey slope hazard ratings (and other hazard zonation strategies) to assess their utility.

We presented an overview of our results in two issues of *Washington Geology* (Dragovich and others, 1993a,b). In the first article, we provided information pertaining to the relations among terrain features (landslide elevation and aspect), geologic materials and landforms, slope gradient, and incidence of landsliding. In the second article, we examined relations of soils and timber-harvesting history to landsliding in the study area, and we compared and contrasted a soils-based slope-stability hazard scheme with our analyses of the landslide inventory.

The pilot study area, 177 mi^2, lies at the intersection of the southern part of the Cascade Range in Washington and a prominent westward branching sub-range, generally termed the Northcraft mountains. Rugged terrain and a variety of geomorphic features result from factors that include glacial erosion and deposition, high annual precipitation (60-100 in.), and mass wasting of folded and faulted Tertiary volcanic and sedimentary bedrock. The variation in land use, ownership, topography, geologic and soils characteristics, climate, landforms, and mass-movement features in the study area allows the results of this project to be applied to many other forested areas that have similar characteristics.

For the pilot project, we divided the general (whole) study area into a focus area, which we examined in detail using aerial photos and field verification of landslides, and a perimeter area, which was investigated using aerial photos and only field reconnaissance. The focus study area of 60,800 acres (95 mi^2) contains 1,021 mapped landslides, of which 667 were field-verified. The perimeter area is 52,480 acres (82 mi^2) and contains 651 mapped landslides, 31 of them field-verified.

We present here the landslide map (Plate 1) and geologic map (Plate 2) of the pilot study area. We also present four data appendices: (I) the landslide inventory field form, used to organize our field data and observations; (II) & (III) focus and perimeter area landslide inventories, respectively, and accompanying explanation; and (IV) soils data and accompanying explanation. In addition, we present a modified version of Varnes' classification system (Plate 3) which we used to categorize the inventoried landslides.

REFERENCES CITED

Dragovich, J. D.; Brunengo, M. J.; Gerstel, W. F., 1993a, Landslide inventory and analysis of the Tilton Creek-Mineral River area (*sic*), Lewis County, Washington, Part 1: Terrain and geologic factors: Washington Geology, v. 21, no. 3, p. 9-18.

Dragovich, J. D.; Brunengo, M. J.; Gerstel, W. F., 1993b, Landslide inventory and analysis of the Tilton River-Mineral Creek area, Lewis County, Washington, Part 2: Soils, harvest age, and conclusions: Washington Geology, v. 21, no. 4, p. 18-30.

NOTE: In Appendices II-IV the duplexed pages are numbered consecutively; in the lower right corner of each page is a letter that guides the reader in assembling panels of related information. For example, in Appendix II pages 19-21 are a, b, and c, the first three panels of this information. Informtion in Appendix III also covers units of three pages, and in Appendix IV the soils data are presented in seven-page units. Readers can copy pages and assemble them so that the "a" page is on the left and then read the information across the panels.

APPENDIX I. LANDSLIDE INVENTORY FIELD FORM

Landslide identification number:_____
Degree of investigation: (from distance) (on-site low) (on-site med) (on-site high)
Photograph: (#_____) (film type_____)
Drainage basin:_____ Investigator initials_____ Date_____
Aerial photograph #:_____
New landslide: (y) (n) (in what sense_____)
Failed slope is: (artificial) (natural)

SKETCH AREA
scale
|----------|

show photograph location in sketch

TERMS (circle features and use in sketches)

ls, landslide; **af**, alluvial fan; **mb**, main body; **bdrx**, bedrock; **bg**, main body gone; **bic**, break in canopy; **ch**, chute; **c**, cliff; **col**, colluvium; **cq**, cirque; **ds**, deep-seated landslide; **dp**, colluvial or alluvial deposit; **ex**, exposed rock or soil; **(ex)**, partially exposed rock or soil (see **ex**); **fl**, flank; **ft**, foot; **gft**, good flow topography (distinct hummocks, etc.); **hd**, head; **h**, hollow (0-order basin); **hm**, hummocky; **hw**, hardwoods; **i**, stream incision; **l**, lobe (landslide deposit lobe); **on**, one landslide on another; **p**, pond; **rej**, rejuvenated landslide; **r**, rills; **rv**, revegetated landslide; **s**, shallow landslide; **sc**, scarp; **sh**, shrubs; **sw**, swamp; **sed**, sediment; **sp**, seepage; **su**, stream undercut; **t**, talus; **tc**, tension cracks; **wt**, wet (swamp or high water table)

ROAD FAILURE

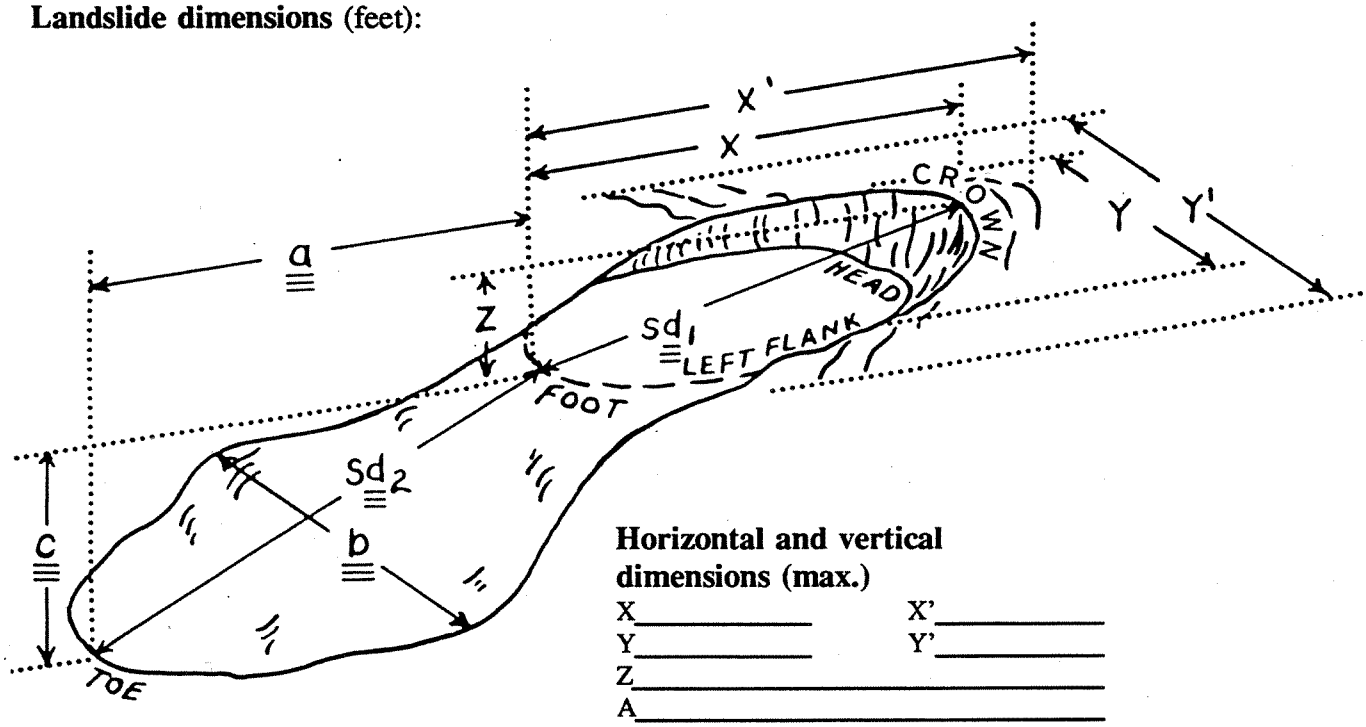
Culvert: blocked ( ) no culvert ( ) culvert poorly located ( ) failed ( ) undersized ( )
Failure type: fill ( ) sidecast ( ) landing ( ) cut-bank ( )
Road age:_____

VEGETATIVE COVER

Stand age: clear-cut ( ) <5 year plantation ( ) 2nd growth ( ) old growth ( )
Other:_____
Average tree age:_____
Root depth: _____in. to_____in. Roots lock into bedrock: (y) (n)
Notes:_____
Phreatophytes: devil's club ( ) horse-tail ( ) willow ( ) salmon-berry ( ) Cascades azalea ( ) maidenhair fern ( ) *Juncus* ( ) lady fern ( ) Other:_____
Phreatophyte location: scarp ( ) body ( ) deposit ( )
Xerophyte: pinemat manzanita ( ) salal ( ) grouse huckleberry ( ) beargrass ( )
Other:_____
Disturbance: slide alder ( ) bracken ( ) Other:_____
_____

LANDSLIDE GEOMETRY

Slope angle (degrees): next to scarp (_____to_____) flank (_____to_____) foot (_____to_____)
Depth (feet): measured perpendicular to slope (_____to_____) Landslide azimuth (degrees)_____
Landslide dimensions (feet):

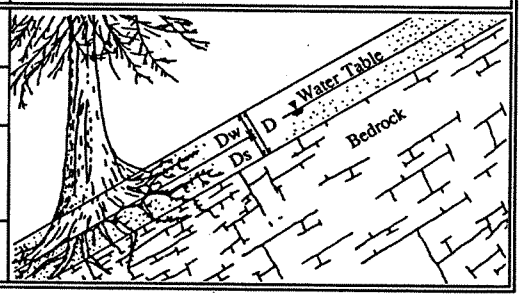


Horizontal and vertical dimensions (max.)

X_____ X'_____
Y_____ Y'_____
Z_____
A_____
B_____
C_____
SD_1_____ **Slope**
SD_2_____ **Distance**

X/Z_____
Y/Z_____
Y/X_____

GROUNDWATER CONDITIONS

Variable	Water depth (feet)	Basis *	Sketch scale |-------|
Dw	____to____		
Ds	____to____		
current Dw or Ds	____to____		
D (Bedrock)	____to____		

*** Basis** (enter #): 1, seepage; 2, relict gully; 3, phreatophytes; 4, gley soil; 5, wet/saturated soils; 6, sag pond; 7, guess; 8, mottled or glade soils; Other:_____

LANDSLIDE CAUSE (circle one or more; *, most likely)

Chemical change: (weathering) (alteration) Other:_____

Physical change: (stress release) (long-term loss of shear strength) (deep cracking)
Other:_____

Dynamic features: On another landslide (landslide #_____) (shallow on deep-seated landslide) (on scarp) (on flank) (on mainbody) (on foot) Other:_____

Failure plane structured control: (weak interbeds) (unconformity) Other:_____
Surface of Failure: (bedding plane) (parting) (joints) (joint set)
Other:_____

Load increase: (fill) (structure) (talus) (another slide)
Other:_____

Unloading toe or removal of buttress:
Unnatural (road) Other:_____
Natural (stream undercut) Other:_____

Ground water or surface water: (0 order basin) (tributary; trib#_____) (impoundment) (perched) (artesian) Other:_____

LANDSLIDE EFFECTS (tributary order determined from 1:24000 topographic map)

( ) Landslide deposit restricted to 0-order basin, does not enter any tributary, or remains completely on a hillside

( ) Landslide enters and remains in a 1st or 2nd order tributary that has a low potential for significant transportation of fines

( ) Landslide enters and remains with high potential for transport of fines

( ) Landslide is dormant or ancient

Notes:_____

LANDSLIDE TYPE (circle one or more; *, most likely)

Movement	Bedrock	Debris	Earth
Falls	rock fall	debris fall	earth fall
Topples	rock topple	debris topple	earth topple
Slides (Rotational)	rock slump	debris slump	earth slump
Slides (Translational)	rock (block) slide	debris slide or avalanche	earth slide
Flows	sackung, gravitational sagging	debris flow or torrent	earth flow
Complex	rock fall-debris flow	slump-debris flow	slump-earthflow

ROCK MASS QUALITY CLASSIFICATION I

( ) **Good quality**: fresh to slightly weathered rock, with widely to moderately spaced fractures (<3 joints/foot)

( ) **Fair quality**: slightly to moderately weathered rock, with closely spaced fractures (3 to 9 joints/foot)

( ) **Poor quality**: moderately to highly weathered rock with closely spaced fractures (>3 to >9 joints/foot)

( ) **Very poor quality**: highly weathered or sheared rock with finely divided fractures or is cataclastically modified (>9 joints/foot)

Cause of fractures: (tectonic) (deep-seated landslide) Other:_____

ROCK MASS QUALITY CLASSIFICATION II

( ) **Very strong**: requires many blows with geologist hammer to fracture, specimen can only be chipped with geologist hammer

( ) **Strong**: requires more than one blow of geologist hammer to fracture

( ) **Medium strong**: cannot be scraped or peeled with a pocket knife, specimen can be fractured with blow of geologist hammer

( ) **Weak**: peel by pocket knife with difficulty, shallow indentations made by firm blow with point of geologist hammer

( ) **Extremely weak**: indented by thumb nail, crumbles with blows with point of hammer, can be peeled with pocket knife

Notes:_____

ROCK DESCRIPTION

Unit (see Plate 2): (Tva_0) (Tva) (Tva_2) (Tva_3?) (Tvc) (Toh) (Ti) (Tno) (Tpg) (Qls) (Tvb_3)
Other:_____

Lithology:_____

Color:_____

Grain size:_____

Bedding:_____

Clast/phenocryst:_____

Sorting:_____

Other:_____

SURFICIAL GEOLOGY

(glacial) (alluvial) Other:_____
Lithology:_____
Color:_____
Grain size:_____
Bedding:_____
Clast/phenocryst:_____
Sorting:_____
Weathering:_____
Other:_____

NOTES:	SKETCH

SOILS

Soil profile: (Use lines in horizontal column for depth scale) (USCS, Unified Soil Classification System)

Horizon	Penetrometer reading	USCS	Percent >3 inch	Depth (in.)	Density-moisture-color-other

Angularity, composition, weathering:_____

Clast (> 3 inch) hardness, weathering, rinds, composition:_____

SOIL REFERENCE TABLES

Consistency of cohesive soil

	Tons/foot squared	Penetration
Very soft	<0.25	thumb will penetrate >1 inch
Soft	0.25-0.5	thumb will penetrate about 1 inch
Firm	0.5-1.0	thumb will penetrate 1/4 inch
Hard	1.0-2.0	thumbnail only indents
Very hard	2.0-4.0	thumbnail will not indent

Density of cohesionless soil

	Relative density	Relative ease of excavation
Very Loose	<15%	easily excavated with hand shovel
Loose	15-35%	excavated with hand shovel
Compact	35-65%	difficult with hand shovel
Dense	65-85%	loosen with pick or shovel
Very Dense	>85%	difficult to loosen with pick or shovel

Tests for fine soils

USCS soil symbol	Dry strength	Dilatancy	Toughness
ml	none to low	slow to rapid	low, or thread cannot be formed
cl	medium to high	none to slow	medium
mh	low to medium	none to slow	low to medium
ch	high to very high	none	high

BEDROCK STRUCTURE

Strike and dip of bedding:_____

Bedding/flow: (very thin) (thin) (moderate) (thick) (massive)

Strike and dip: (joints) (fracture) J1, _____ J2, _____ J3, _____

Other:_____

Fault:_____

Relation between discontinuities and landsliding (see SKETCH next page):

_____

_____

dip-slope ( ) scarp-slope ( ) cross-slope ( ) parallels lithology ( ) fold axis area ( ) Scale l----------l	**SKETCH**

LANDSLIDE AGE

Certainty: definite ( ) highly probable ( ) probable ( ) questionable ( )
Notes:_____

Activity: active ( ) recent ( ) dormant ( ) ancient ( )
Estimated landslide age:_____

Age criteria:

(1) On 1988 photo (y)(n)
(2) (trees) (stumps) of _____ age are (bent) (bowed) (leaning) (straight)
(3) "Old growth" (age____to____) on (scarp) (flank) (deposit) are (affected) (unaffected) by landslide
(4) Revegetation of landslide is (none) (slight) (moderate) (heavy immature) (heavy mature)
(5) Estimated age of unaffected vegetation
(6) Landslide features are: (distinct, fresh, exposed) (intermediate) (old, subdued)
(7) Effects on pumice (Yw-800) (Yn-3500) are (definite) (questionable) (indeterminate)
(8) Other age criteria:_____

GENERAL NOTES

_____

_____

_____

_____

_____

_____

APPENDICES II and III: EXPLANATION OF THE LANDSLIDE INVENTORIES OF THE FOCUS AND PERIMETER STUDY AREAS

GENERAL LANDSLIDE ATTRIBUTES

LOCATION

T/R: township and range

LS ID#: landslide identification number using the USGS water-well location convention. The first four numerals give the township and range--e.g., **13 05** 26L2. The fourth and fifth numerals give the section that encompasses the majority of the landslide--e.g., T13 05 **26**L2. The letter designation gives the 1/16th of the section encompassing the majority of the landslide as illustrated below. The last one or two numerals of the landslide identification number further distinguish the landslides within a section. In the focus study area (see Appendix III) landslides identified in the field start at 20. In the perimeter study area (see Appendix IV) the final two digits begin with 20 if the landslide was added in the field or during the post-field aerial photograph interpretation session.

*: field verified

For example:

13 05-26L2 = Township 13 North, Range 5 East, section 26, 1/16th subsection L, landslide #2

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

DRAINAGE BASIN

Drainage basin: name of the major drainage basin in which the landslide is located

ELEVATION

ELEV: elevation of the landslide crown (essentially undisturbed material adjacent to the highest part of the main scarp; nomenclature of the landslide features provided in Fig. 1A)

AZIMUTH

AZ: azimuth of the initial movement direction in degrees

ROCK TYPES

#1 and #2: Label of rock map unit encompassing landslide surface of rupture as derived from the geologic map of the Centralia 1:100,000 quadrangle (Schasse, 1987). #1 identifies the rock unit underlying most of the landslide, and #2 identifies the rock unit that underlies a lesser part of the landslide (if any).

BEDROCK STRUCTURE

az: azimuth of local bedding dip azimuth
dip: azimuth of local bedding dip angle (primary or lower range)
dip: azimuth of local bedding dip angle (upper range)
s: bedding slope type, given as cross-slope, scarp-slope or dip-slope (xs, ss, or ds, respectively)
fa: landslide located in major fold axis or hinge zone
pl: inferred landslide aspect is approximately parallel to strike of a lithologic unit and may be genetically related to the rock type (for example, mechanically weak material)

LEWIS COUNTY SOIL MAP UNITS

sc: soil phase number encompassing the area of depletion as derived from the soil survey of Soil Conservation Service county soil maps (Evans and Fibich, 1987). Second sc designation gives smaller soil polygon in the area of depletion.
toe: soil phase number for the area of accumulation (deposit below the foot) as derived from the maps. Second toe designation gives the smaller soil type polygon in the deposit area.

LANDSLIDE TYPE

Varnes: Varnes (1978) soil movement classification system number
Abbrev: landslide type abbreviations

cb, road cut-bank failure; **da**, debris avalanche; **df**, debris flow; **ds**, debris slide; **dsr**, debris slump rotational; **dt**, debris torrent; **ef**, earth flow; **ld**, landing failure; **rd**, road failure (general); **rf**, rock fall; **rt**, rock topple; **rxsr**, rock slump rotational; **sc**, road side cast failure; **sr**, slump rotational (general); **sr-ef**, slump-earthflow;

LANDSLIDE GEOMORPHIC FEATURES (see Fig. 1A for landslide features nomenclature and Fig 1B for landslide dimensions nomenclature)

sc, scarp; **fl**, flank; **hm**, hummocky; **pr**, pressure ridge; **ex**, exposed soil or rock (indicates most of slide exposed or unvegetated and thus recent or active); **(ex)**, *partially* exposed rock or soil

Other features:

bic, break in canopy; **sh**, shrubs (suggestive of soil disturbance/opportunistic species); **hw**, hardwoods (suggestive of soil disturbance/opportunistic species); **rv**, revegetated landslide (commonly refers to reduced area of soil exposure on different age aerial photographs); **on**, one smaller landslide on another; **i**, stream incision; **p**, pond; **sw**, swamp; **wt**, wet (swamp or high water table); **sed**, wholly or partially unvegetated and recently deposited alluvial sediment suggestive of upstream landsliding; **gft**, good flow topography (distinct hummocks, etc.); **l**, lobe (for example, distinct earth-flow lobe); **c**, cliff; **h**, hollow (0-order stream tributary or area of convergent water flow lines); **t**, talus; **ch**, chute (commonly refers to probable scoured dt channel); **f**, face; **h** or **hd**, head; **r**, rills; **dp**, colluvial or alluvial deposit; **af**, alluvial fan (type of dp and commonly refers to dt dp); **ft**, foot (indicated only if very distinct); **to**, toe (indicated only if very distinct); **mb**, main body (indicated only if very distinct); **bg**, main body gone (typically of shallow failures where the main body was completely removed during rapid failure); **rej**, rejuvenated landslide (possible renewed landslide movement); **cq**, cirque

ACTIVITY

AC: Activity and age of failure (activity class reflects the age of the latest movement only)

1, active (present activity suggested by exposed soil or rock, tension cracks, or genetically by stream undercutting); **2**, recent (exposed soil or rock or other indications of recent landslide); **3**, dormant (fair to good potential for landslide rejuvenation); **4**, ancient ($\approx 10^2$ to $\approx 10^6$ years old; low potential for landslide rejuvenation)

CERTAINTY

CE: Degree of certainty based on the number of landslide features illustrated in Figure 1

1, definite (100% certainty); **2**, highly probable (80%-100% certainty); **3**, probable (60%-80% certainty);
4, questionable (40%-60% certainty)

DIMENSIONS

AREAL DIMENSIONS

Note: Horizontal areal dimensions (rounded to 5-ft intervals). Areal dimensions differ from landslide areal dimensions on a sloping surface; see Fig. 1B for dimensions nomenclature

Lx, axial length from crown to the estimated toe of surface of rupture of non-debris torrent failures (axial length of zone of depletion); **La**, axial length from toe of surface of rupture to the toe (axial length of the zone of accumulation) in non-debris torrent landslides (length of surface of separation); **La1**, axial length from the crown to the estimated toe of the surface of rupture for debris torrent; **La2**, axial length from toe of surface of rupture to the toe of the deposit or main channel (if several debris torrents into main channel), or to next debris torrent source area; **La3**, main dt channel length (only note once for dt network including several debris torrents into one channel); **Width**, length from flank to flank in the main body; **Area**, horizontal area of the landslide main body estimated using the formula for an ellipse (where a and b are the major and minor axes of the ellipse and equal Lx and width of the landslide, respectively)

DEPTH

Depth: Vertical depth to surface of rupture; estimated for most deep-seated landslides

VOLUME

Volume: Landslide volume estimated using the area x depth

SLOPE

Slope: Slope gradient measured adjacent to the landslide. sc, slope measured above the scarp; fl, slope measured along the flank. Measurements derived in the field using an inclinometer or in the office using topographic maps (1:24,000-scale)(ot, other miscellaneous field slope measurements)

FOREST PRACTICES

CLEAR CUT AGE

cc age: Time (in years) since timber harvest

FOREST PRACTICES (general notes)

EFFECTS: Natural or artificial features affected or potentially affected by the landslide. Most dormant and ancient deep-seated landslides are commonly assigned an effect even though risk or hazard from landslide rejuvenation is low.

Abbreviations: **pl**, plantation; **ld**, landing; **rd**, road (very commonly a logging road); **trb(#)**, tributary (order) affected or potentially affected; **creek or river (name)**, water body affected or potentially affected; **dam**, dam; **br**, bridge; **hw**, paved highway; **hr**, human residence or structure; **st**, probably unoccupied general structures (barns, etc...)

#: Department of Natural Resources (DNR) stream type affected by landslide (data partially complete)
(x = landslide confined to hillslope and does not affect stream quality)

AERIAL PHOTOGRAPH NUMBER

Aerial photograph number. Aerial photographs available from Washington State Department of Natural Resources, Engineering Division (Photo and Map Sales), Olympia

REFERENCES CITED

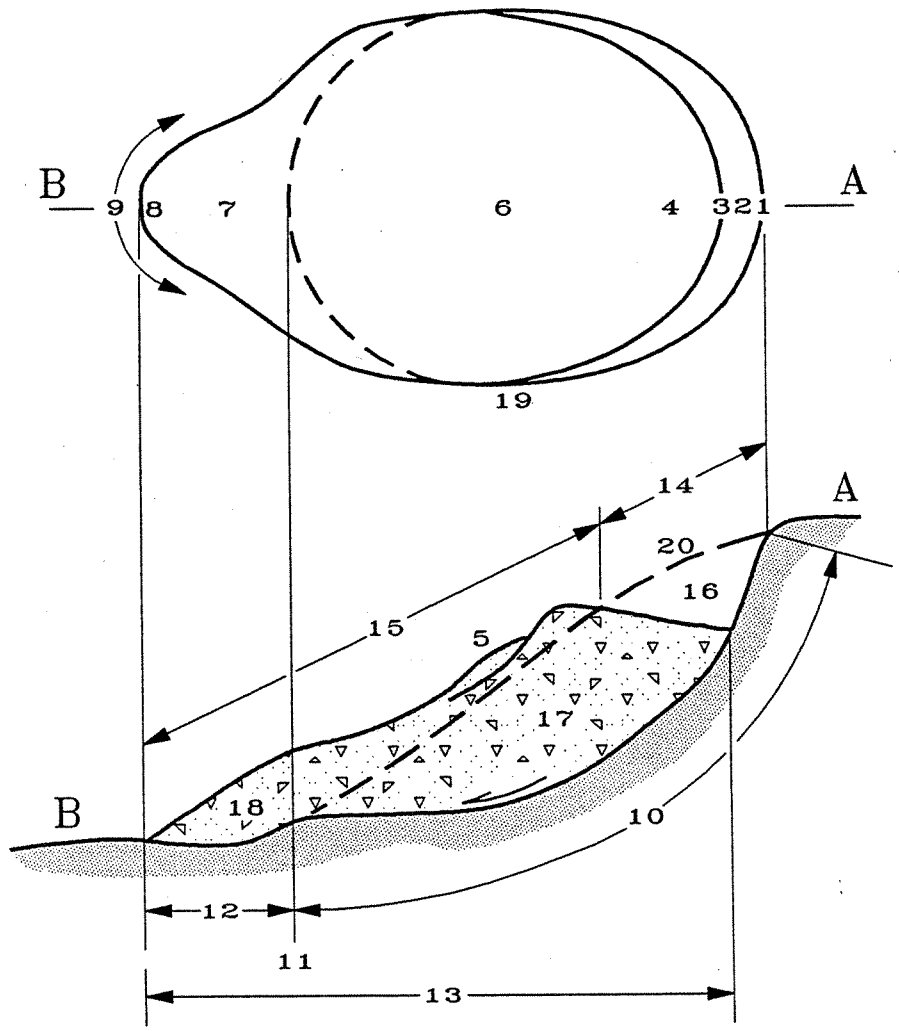
Evans, R. L.; Fibich, W. R., 1987, Soil survey of Lewis County area, Washington: U.S. Soil Conservation Service, 466 p., 108 pl.

Schasse, H. W., compiler, 1987, Geologic map of the Centralia quadrangle, Washington: Washington Division of Geology and Earth Resources Open File Report 87-11, 28 p., 1 pl., scale 1:100,000.

Varnes, D. J., 1978, Slope movement types and processes. *In* Schuster, R. L.; Krizek, R. J., editors, Landslides—Analysis and control: National Research Council Transportation Research Board Special Report 176, p. 11-33.

EXPLANATION

(1) Crown: The practically undisplaced material adjacent to the highest parts of the main scarp.
(2) Main scarp: A steep surface on the undisturbed ground at the upper edge of the landslide, caused by movement of the displaced material away from the undisturbed ground.
(3) Top: The highest point of contact between the displaced material (13) and the main scarp (2).
(4) Head: The upper parts of the landslide along the contact between the displaced material and the main scarp (2).
(5) Minor scarp: A steep surface on the displaced material of the landslide produced by differential movements within the displaced material.
(6) Main body: The part of the displaced material of the landslide that overlies the surface of rupture between the main scarp (2) and the toe of the surface of rupture (11).
(7) Foot: The portion of the landslide that has moved beyond the toe of the surface of rupture (11) and overlies the original ground surface (20).
(8) Tip: The point on the toe (9) farthest from the top (3) of the landslide.
(9) Toe: The lower, normally curved margin of the displaced material of a land-slide, the most distant from the main scarp (2).
(10) Surface of rupture: The surface forming the lower boundary of the displaced material, below the original ground surface.
(11) Toe of surface of rupture: The intersection (normally buried) between the lower part of the surface of rupture (10) of a landslide and the original ground surface.
(12) Surface of separation: The part of the original ground surface now overlain by the foot (7) of the landslide.
(13) Displaced material: Material displaced from its original position on the slope by movement in the landslide. It forms both the depleted mass (17) and the accumulation (18).
(14) Zone of depletion: The area of the landslide within which the displaced material (13) lies below the original ground surface (2).
(15) Zone of accumulation: The area of the landslide within which the displaced material lies above the original ground surface (20).



(16) Depletion: The volume bounded by the main scarp (2), the depleted mass (17), and the original ground surface (20).
(17) Depleted mass: The volume of the displaced material that overlies the rupture surface (10) but underlies the original ground surface (20).
(18) Accumulation: The volume of the displaced material (13) that lies above the original ground surface (20).
(19) Flank: The undisplaced material adjacent to the sides of the rupture surface. Compass directions are preferable in describing the flanks, but if left and right are used, they refer to the flanks as viewed from the crown.
(20) Original ground surface: The surface of the slope that existed before the landslide took place.

Figure 1A. Features of landslides. The upper portion of the figure is a plan of a typical landslide; the dashed line is the trace of the rupture surface on the original ground surface. In the cross section the dotted pattern indicated undisturbed ground, and the coarser pattern shows the position of the displaced material. Redrawn from "Landslide teaching aids" prepared by D. M. Cruden (chair), 1990, Suggested nomenclature for landslides: Bulletin of the International Association of Engineering Geologists, v. 4, p.13-16; used with permission of the publisher.

EXPLANATION

W_d Width of the displaced mass: the maximum breadth of the displaced mass perpendicular to the length, L_d.

W_r Width of the rupture surface: the maximum width between the flanks of the landslide, perpendicular to the length, L_r.

L Total length: the minimum distance from the tip of the landslide to its crown.

L_d Length of the displaced mass: the minimum distance from the tip to the top.

L_r Length of the rupture surface: the minimum distance from the toe of the surface of rupture to the crown.

D_d Depth of the displaced mass: the maximum depth of the displaced mass, measured perpendicular to the plane containing W_d and L_d.

D_r Depth of the rupture surface: the maximum depth of the rupture surface below the original ground surface, measured perpendicular to the plane containing W_r and L_r.

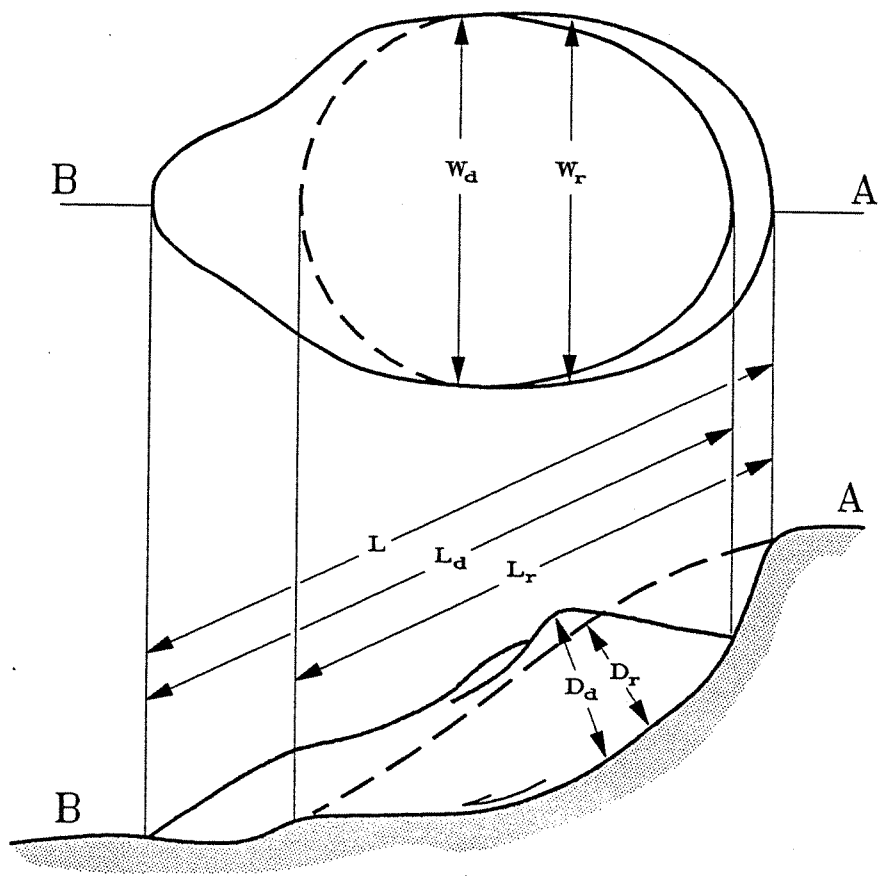


Figure 1B. Dimensions of landslides. In the section, the shaded pattern indicates undisturbed ground, and the dashed line represents the original ground surface. The dashed line in the plan is the trace of the rupture surface on the original ground surface. Redrawn from "Landslide teaching aids" prepared by D. M. Cruden (chair), 1990, Suggested nomenclature for landslides: Bulletin of the International Association of Engineering Geologists, v. 4, p.13-16; used with permission of the publisher.

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 04E	01A1	*	Tilton R	1560	260	Tpg		sse	15	25	xs	fa			146	147		
12 04E	01A2	*	Tilton R	1400	170	Tpg		sse	15	25	xs	fa			147			
12 04E	01A20	*	Tilton R	1400	195	Tpg		sse	15	25	xs	fa			147			
12 04E	01A21	*	Tilton R	1500	240	Tpg		sse	15	25	xs	fa			147			
12 04E	01D20	*	Tilton R	1180	210	Tpg		sw	12	25	ds				147			
12 04E	01D21	*	Tilton R	1140	210	Tpg		sw	12	25	ds				147			
12 04E	11D1	*	Tilton R	2400	30	Tva		sw	8	10	ss				3			
12 04E	11D2	*	Tilton R	2400	40	Tva		sw	8	10	ss				3			
12 04E	11D3	*	Tilton R	2480	30	Tva		sw	8	10	ss				3			
12 04E	11D4	*	Tilton R	2600	35	Tva		sw	8	10	ss				3			
12 04E	11D5	*	Tilton R	2600	15	Tva		sw	8	10	ss				3			
12 04E	11D6	*	Tilton R	2600	20	Tva		sw	8	10	ss				3			
12 04E	11F1	*	Tilton R	2600	15	Tva		sw	8	10	ss				3			
12 04E	11F2	*	Tilton R	2600	15	Tva		sw	8	10	ss				3			
12 04E	11K20	*	Tilton R	1400	70	Tva		sw	8	10	ss				147			
12 04E	13K1		Tilton R	2400	35	Tva		sw	8	10	ss				3			
12 04E	13R1		Tilton R	2240	65	Tva		sw	8	10	ss				3			
12 05E	01A1	*	Rainey C	3200	250	Tia	Toh	ese	35		ss			pl	32			
12 05E	01C1	*	SF Tilton	2000	220	Tia	Toh	ese	35		xs			pl?	220	31		
12 05E	01E20	*	EF Tilton	2480	245	Tva		ese	10	20	xs				251			
12 05E	01F20	*	Rainey C	2480	180	Tia	Toh	ese			xs				251			
12 05E	01H1	*	Rainey C	2800	190	Tva		se	35		xs			pl?	250	14		
12 05E	01H20	*	Rainey C	2520	220	Tva		se	35		xs				14			
12 05E	01H21	*	Rainey C	2860	220	Tva		se	35		xs				14			
12 05E	01H22	*	Rainey C	2920	180	Tva		se	35		xs				14			
12 05E	01P1	*	Rainey C	2200	200	Tva		se	35		xs	fa		pl	257			
12 05E	01P2	*	Rainey C	2200	200	Tva		se	35		xs	fa			165			
12 05E	01P20	*	Rainey C	1920	210	Tva		sse	26	35	xs	fa			257			
12 05E	01P21	*	Rainey C	2200	215	Tva		sse	26	35	xs	fa			165			
12 05E	01P23	*	Rainey C	1920	215	Tva		sse	26	35	xs				165			
12 05E	01R1	*	Rainey C	2000	160	Tva		sse	26	35	ds	fa			251			
12 05E	02D1		SF Tilton	1800	45	Tva		sse	26	35	xs	fa			146			
12 05E	02E1		SF Tilton	2200	20	Tva		sse	26	35	ss	fa			146			
12 05E	02P1	*	SF Tilton	2600	10	Tva		sse			ss				165			
12 05E	02P2	*	SF Tilton	2480	10	Tva		sse			ss				165			
12 05E	02P3	*	SF Tilton	2860	350	Tva		sse	50		ss				165			
12 05E	02R1	*	SF Tilton	2500	350	Tva		sse			ss				165			
12 05E	02R2	*	Rainey C	2600	95	Tva		s	65		xs			pl	165	250		
12 05E	03A1		SF Tilton	2480	355	Tva		s	65		ss				147			
12 05E	03D1		SF Tilton	2300	60	Tva		s	48		xs				251			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VIs5	sr-ef	sc	fl	hm			dp on	4	4	500				
VIs5	sr-ef	sc	fl	hm			dp on	4	2	894				
IIIBk	ds	sc	fl			ex		2	1	50				
VBq3	da	sc	fl				(ex)	3	2	90				
IIIBk	ds	sc	fl				dp	3	1	55				
IIIBk	ds	sc	fl				dp	3	1	50				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl			ex	dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	1	120				
VBq3	da	sc	fl				dp ch	3	2	100				
VBq3	da	sc	fl				dp ch	3	2	100				
VIs5	sr-ef	sc	fl	hm	pr			4	3	1000				
VIs5	sr-ef	sc?	fl	hm				4	2	2500	3000			
IIIAg	rxsr	sc	fl				hd ch	3	2	150				
VBqt	dt	sc	fl				ch dp sed	2	1	80				
VIs5	sr-ef	sc	fl	hm			on	4	2	1300				
VBq3	da	sc	fl			ex		2	1	15				
VBq3	da	sc	fl			ex		2	1	15				
IIIBk-VII	ds-cb	sc	fl				(ex)	3	2	75				
VBq3	da	sc	fl	hm			(ex) i SU	3	3	700	1800			
Ia-IId1	rf-rt						SU (ex)	2	3	200				
VBq3	da	sc	fl			ex	SU?	2	1	100				
VBq3	da	sc	fl			ex	SU?	1	1	100				
VBq3	da	sc	fl			ex	SU?	2	1	50				
VBqt	dt	sc	fl				wt ch	3	3	300		42		
VBq3	da	sc					BIC ch	3	3	50				
VBq3	da	sc					BIC ch	3	3	50				
VBq3	da	sc					hw BIC ch	3	2	70				
VBq3	da	sc					hw BIC ch	3	2	91				
VBq3	da	sc					hw BIC ch	3	2	81				
VBq3	da	sc					hw BIC ch	3	2	75				
VIs5	sr-ef	sc		hm				4	4	900	1800			
VIs5	sr-ef	sc	fl	hm	pr			3	3	1375	900			
VIs5	sr-ef	sc	fl	hm	pr		on hw (ex) I	4	2	690	735			

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
526	206560	60	12393612	13	13				7		5	SW88 17 90 124-125
447	313860	87	27305818	16	22				7		4	SW88 17 90 124-125
40	1571	4	6283						7			SW88 17 90 124-125
50	3534	3	10603						7			SW88 17 90 124-125
50	2160	8	17279						1			SW88 17 90 124-125
35	1374	7	9621						1			SW88 17 90 124-125
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
35	3299	15	49480						90			SW88 17 89 55-56
100	7854	10	78540				45		90			SW88 17 89 55-56
100	7854	10	78540						90			SW88 17 89 55-56
1000	785400	90	70686000	34	16				12	stream	4	SW88 18 96 217-218
1500	2945250	90	265072500	36	24				60		3	SW88 18 96 217-218
150	17672	15	265073						0			SW88 18 96 217-218
75	4712	6	28274						60			SW88 18 96 217-218
800	816816	100	81681600	19	24				12		5	SW88 18 96 217-218
8	94	5	471			50			6			SW88 18 96 217-218
45	530	8	4241			50			6			SW88 18 96 217-218
120	7069	13	91892						6			SW88 18 96 217-218
400	219912	8	1759296	34	49	35	50		14		4	SW88 18 96 217-218
884	138859	3	416576	32	39				14		4	SW88 18 96 217-218
70	5498	3	16493				53		14			SW88 18 96 217-218
25	1964	3	5891			48			14			SW88 18 96 217-218
50	1964	3	5891						14			SW88 18 96 217-218
120	28274	6	169646	22			38		15		5	SW88 18 95 182-183
50	1964	4	7854	31					50		x	SW88 18 95 182-183
50	1964	4	7854	31					50		5	SW88 18 95 182-183
70	3848	4	15394	39					50		x	SW88 18 95 182-183
91	6504	4	26016	39					50		5	SW88 18 95 182-183
81	5153	4	20612	50					50		x	SW88 18 95 182-183
75	4418	4	17672	47					50		x	SW88 18 96 217-218
1300	918918	90	82702620	27	23				20		5	SW88 18 95 182-183
1600	1727880	80	138230400	22	24				70		3	SW88 18 94 149-150
690	373929	100	37392894	27					70		5	SW88 18 94 149-150

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 05E	03D2		SF Tilton	2400	40	Tva		s							251			
12 05E	03H1		SF Tilton	2400	150	Tva		s	48		ds				147	146		
12 05E	03K1		SF Tilton	2600	20	Tvc		s	35						146			
12 05E	03R1		SF Tilton	2300	160	Tvc		s	35		ds				146			
12 05E	04D1		SF Tilton	2900	30	Tva		sw	35		xs				217			
12 05E	04E1		SF Tilton	3500	335	Tvc		s	35		ss	fa			175			
12 05E	04G1		SF Tilton	3400	5	Tvc		s	51		ss				175			
12 05E	04G2		SF Tilton	3380	10	Tvc		s	46		ss				175			
12 05E	05A1	*	SF Tilton	3300	0	Tva		se	50	27	xs				175			
12 05E	05F1	*	Minnie C	2900	270	Tva		e	15		ss				160			
12 05E	05F2	*	Minnie C	2900	270	Tva		e	15		ss				160			
12 05E	05K1		Minnie C	2900	165	Tva		e	48		xs			pl?	165			
12 05E	05K2		Minnie C	3000	170	Tva		e			xs			pl?	165			
12 05E	05L1		Minnie C	2900	135	Tva		e			xs		f		165			
12 05E	05P1		Minnie C	2500	265	Tva	Tpg	e					f		165			
12 05E	05P2		Minnie C	2400	330	Tva		e			ss			pl?	165			
12 05E	05Q1		Minnie C	2900	280	Tpg		e				fa			250		165	
12 05E	06B1		Minnie C	2100	270	Tpg		e							250			
12 05E	06F1	*	Davis Lake	1960	245	Tpg		ss	12		xs			pl?	147			
12 05E	06L1		Davis Lake	2000	185	Tpg		ss	12		xs				147			
12 05E	06L20	*	Davis Lake	2160	240	Tpg		ss	12		ss			pl	147	251		
12 05E	06P1		Davis Lake	1700	140	Tpg		ss	12		xs				147			
12 05E	06Q1	*	Davis Lake	1880	255	Tpg		ss	12		ss				3			
12 05E	07A1		Davis Lake	1880	115	Tpg		e			ds		f		3		147	
12 05E	07A20		Davis Lake	1640	160	Tpg		e			xs				3			
12 05E	07A21		Davis Lake	1680	100	Tpg		e			ds				3			
12 05E	07B1		Davis Lake	1880	255	Tpg		e			ss				3			
12 05E	07F1	*	Davis Lake	1200	235	Qls		e				fa			145			
12 05E	08C1		Minnie C	2640	243	Tva		e			ss				165			
12 05E	08C2		Minnie C	2340	240	Tva		e			ss				147			
12 05E	08E1		Minnie C	1800	240	Tva		e			ss				147			
12 05E	08J1		Johnson C	2200	265	Tva		ese			ss				165			
12 05E	08J2		Johnson C	2000	285	Tva		ese			ss				165			
12 05E	08K1		Johnson C	2200	275	Tva		ese			ss				165			
12 05E	08K2		Johnson C	1680	140	Tva		se			ds			pl?	165			
12 05E	08K20		Johnson C	2000	280	Tva		ese			xs				165			
12 05E	08K21		Johnson C	1800	350	Tva		ese			xs				165			
12 05E	08K3		Johnson C	1800	140	Tva		se			ds				165			
12 05E	08M1		Minnie C	2000	240	Tva		e			ss				147			
12 05E	09D1		Johnson C	3300	45	Tvc		e			ss				220			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VIs5	da	sc					BIC	3	3	40				
IIIBk	ds	sc?				ex	BIC	3	2	50				
IIIBk	ds						BIC	3	4	60				
IIIBk	ds	sc?	fl?				SU	3	3	490				
IIIAg	rxsr	sc	fl				hd	3	4	110	140			
VIs5	sr-ef	sc	fl	hm			hw	3	3	459	665			
VIs5	sr-ef	sc	fl	hm			hw sh	3	3	550	760			
VIs5	sr-ef	sc	fl	hm			ch hw	3	3	40				
IIIAg	rxsr	sc					on	4	3	2000				
IIIBk	ds	sc	fl				sh ch hw h	3	3	150				
IIIBk	ds	sc	fl				sh ch hw h bg	3	3	150				
VIs5	sr-ef	sc	fl				hw h I SU	4	2	405				
VIs5	sr-ef	sc	fl				h I SU	4	3	77				
Ia-IId1	rf-rt	sc				ex	sh ch	2	1	125	125			
IIIAg	rxsr	sc	fl				bg	3	3	305				
IIIBk	ds	sc					SU	3	3	285				
VIs5	sr-ef	sc	fl	hm?			I SU	4	3	1840				
VIs5	sr-ef	sc		hm?				4	4	1131				
VBq3	rxsr	sc					rx?	4	4	790				
VBq3	da	sc	fl			ex	ch SU?	2	2	188				
VIs5	sr-ef	sc	fl	hm	pr			4	2					
IIIBk	ds	sc	fl			ex	SU	2	1	140				
VIs5	sr-ef	sc	fl				rx i	4	4	1720				
VIs5	sr-ef	sc	fl				rx on	3	3	680	1000			
VBq3-VII	da-sc	sc					(ex)	2	2	30				
IIIBk	ds	sc	fl				(ex) dp	2	2	40				
IIIAg	rxsr	sc	fl	hm?			rx	4	4	1800				
VIs5	sr-ef	sc		hm?				4	3	1400				
VBq3	da	sc					I? ch h	3	4	80				
VIs5	sr-ef	sc	fl				bg SU	3	3	400				
IIIAg	rxsr	sc	fl		pr?		I SU	4	3	1280				
VBq3	da	sc	fl				dp ch	3	2	339				
VBq3	da	sc	fl				dp ch	3	2	377				
IIIAg	rxsr	sc	fl				ch dp sh	3	2	200				
VBq3	da	sc	fl			ex		2	1	40	40			
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex	SU	2	1	40	10			
IIIAg	rxsr	sc	fl		pr			4	3	1240				
Ia-IId1	rf-rt	sc					c t	2	1	10				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
40	1257	4	5027						70			SW88 18 94 149-150
80	3142	4	12566	28					70			SW88 18 94 149-150
40	1885	4	7540	22					70	trb	5	SW88 18 94 149-150
350	134696	4	538784	32	18				70	trb	5	SW88 18 94 149-150
165	14255	20	285100	27	31				8	trb	5	SW88 18 93 112-113
514	185296	50	9264814	28	31				50			SW88 18 93 112-113
734	317066	50	15853299	22	38				50			SW88 18 93 112-113
40	1257	4	5027						50			SW88 18 93 112-113
2045	3212286	50	160614300	30	30				70	trb2	5	SW88 18 92 85-86
100	11781	5	58905	29	27				35	rd,trb1	5	SW88 18 92 85-86
100	11781	5	58905						35	rd,trb1	5	SW88 18 92 85-86
285	90655	25	2266370	28	28				35	trb1	5	SW88 18 92 85-86
580	35076	25	876899	28	22				35	Minnie C	4	SW-C-78 46B-36
145	14235	4	56942	27	31				35	trb1	4	SW88 18 92 85-86
980	234756	20	4695121	38	35				16	trb2	4	SW88 18 92 85-86
370	82820	5	414102	39					70	trb1	4	SW88 18 92 85-86
1025	1481264	50	74063220	18	32				35	Minnie C	4	SW88 18 92 85-86
1700	1510089	80	120807086	34	24				5	trbx		SW88 18 92 85-86
530	328847	10	3288470	16	18				1	trb	3	SW88 18 91 16-18
40	5906	4	23625	30	25				3	trb	5	SW88 18 91 16-18
	0	50	0						3		5	SW88 18 91 16-18
400	43982	6	263894	30	29				3	trb	5	SW88 18 91 16-18
1400	1891243	50	94562160	34	24				3		4	SW88 18 91 16-18
600	320443	20	6408864	22	27				9		3	SW88 18 91 16-18
20	471	4	1885						9		3	SW88 18 91 16-18
30	942	4	3770						9		3	SW88 18 91 16-18
1200	1696464	50	84823200	21	35				3		5	SW88 18 91 16-18
2000	2199120	50	109956000	16	18				90	Minnie C	3	SW88 18 91 16-18
280	17593	8	140744	31	41				70	Minnie C	4	SW88 18 92 83-84
400	125664	30	3769920	35	34				70	Minnie C	5	SW88 18 92 83-84
1040	1045524	40	41820979	39	38				70	Minnie C	5	SW88 18 92 83-84
57	15176	4	60705	34	39				12		5	SW88 18 92 83-84
57	16877	4	67510	39	28				12	Johnson C	5	SW-C-78 46B34
200	31416	40	1256640	36	42				10	Johnson C	4	SW88 18 92 83-84
30	942	4	3770	46					30	Johnson C	4	SW88 18 92 83-84
40	1257	4	5027						10			SW88 18 92 83-84
40	1257	4	5027						10			SW88 18 92 83-84
30	942	4	3770	46					30	Johnson C	4	SW88 18 92 83-84
1280	1246587	50	62329344	34	28				30	Minnie C	5	SW88 18 92 83-84
	0	4	0						20			SW88 18 92 83-84

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 05E	09E1		Johnson C	2600	270	Tvc		e			ss				220			
12 05E	09H1		Steffen C	2500	90	Tvc		ese			ds	fa			251			
12 05E	09L1		Steffen C	2740	125	Tvc		e			ds				165	250		
12 05E	09N20		Sand C	2780	190	Tvc		e			ss				165			
12 05E	09N21		Sand C	2600	190	Tvc		e	32		ss				165			
12 05E	09N22		Sand C	2380	200	Tvc		e			ss				165			
12 05E	10C1		Steffen C	2900	230	Tvc		se			xs	fa			217	165		
12 05E	10J1		Frost C	2280	150	Tvc		se				fa			147			
12 05E	10K1		Frost C	1920	112	Tvc		e			ds	fa			147			
12 05E	10L1		Frost C	1400	115	Tvc		e			ds	fa			251			
12 05E	10M1		Frost C	2740	270	Tvc		e			ss				165			
12 05E	10M2		Frost C	2740	270	Tvc		e			ss				165			
12 05E	10M3		Frost C	2740	270	Tvc		e			ss				251			
12 05E	10P1		Frost C	1400	90	Tvc		e			ds				147			
12 05E	10Q1		Steffen C	1100	160	Tvc		e			xs				147			
12 05E	11C1		Rainey C	2600	190	Tvc		sse	14		ds				251			
12 05E	11L1		Rainey C	2000	230	Tvc		s	35		xs				251	147		
12 05E	11M1		Rainey C	1600	140	Tvc		s	21		xs				147			
12 05E	11M2		Rainey C	1600	180	Tvc		s			xs				147			
12 05E	11N1		Rainey C	1200	230	Tvc		s			ds				147			
12 05E	11R1		Rainey C	1440	185	Tvc		s	23		ds				59	60		
12 05E	12B1	*	Rainey C	1880	210	Toh		e	36		xs	fa			3			
12 05E	12B2	*	Rainey C	1880	40	Toh		e	36		xs	fa			3			
12 05E	12B20		Rainey C	1800	120	Toh		se	36		xs	fa		pl?	3			
12 05E	12B21		Rainey C	1600	160	Toh		s	13		ds	fa			3			
12 05E	12E1		Rainey C	2100	150	Tva		s	13		ds				3			
12 05E	12E2		Rainey C	2000	180	Tva		s	13		ds				3			
12 05E	12E3		Rainey C	2000	150	Tva		s	13		ds				3			
12 05E	12F1	*	Rainey C	1200	100	Toh		s	13		xs			pl?	59			
12 05E	12F2	*	Rainey C	1440	110	Toh		s	13		xs			pl?	60			
12 05E	12F20		Rainey C	1640	190	Tva	Toh	s	13		ds				60			
12 05E	12F21		Rainey C	1760	350	Tva	Toh	s	13		ss				60			
12 05E	12F22		Rainey C	1440	65	Tva	Toh	s	13		ss				60			
12 05E	12F23		Rainey C	1600	40	Tva	Toh	s	13		ss				60			
12 05E	12F3	*	Rainey C	1700	160	Tva		s	13		ds				3			
12 05E	15B1		Steffen C	1800	150	Tvc		e			ds				147			
12 05E	15D1		Steffen C	1500	100	Tvc		e	19		ds	fa			3			
12 05E	15D2		Steffen C	1700	270	Tvc		e			ss				3			
12 05E	15D3		Steffen C	1700	255	Tvc		e	50		ss				3			
12 05E	15D4		Steffen C	1640	250	Tvc		e	50		ss				3			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
Ia-IId1	rf-rt	sc					c t	2	1	10				
IIIBk-VII	ds-sc	sc	fl			ex		2	1	40	40			
VIs5	sr-ef	sc	fl	hm	pr		l gft	3	1	920	1220			
VBqt	dt	sc	fl				bg	3	2	80				
VBqt	dt	sc				ex	ch s	2	1	40				
VBqt	dt	sc	fl			ex	ch s	2	1	40				
IIIBk	ds	sc	fl				hw h	3	2	370	530			
VIs5	sr-ef	sc	fl					4	1	1405				
VBqt	dt	sc					ch sed dp af	3	1	60				
VIs5	sr-ef	sc	fl		pr		wet	4	3	580	260			
VBq3	da	sc	fl			ex	sc l	3	1	100				
VBq3	da	sc	fl				(ex)	2	1	50				
IIIAg	rxsr	sc	fl					4	2					
VBqt	dt		fl			ex	h dp sed af ch	3	1	50				
IIIBk	ds	sc	fl				BIC	3	4	150				
VBqt	dt	sc	fl				ch? h (ex)	3	2	200	325			
VBqt	dt	sc	fl			ex	h c hw dp af	2	1	210		470	650	1742
IIIAg	rxsr	sc	fl				hw SU	3	3	435				
VIs5	sr-ef	sc	fl				dp hw sh SU?	3	2	435	435			
IIIBk	ds	sc	fl			ex	hw sh h	2	1	110				
VBq3-VII	da	sc	fl				hw ch?	3	2	180				
IIIAg	rxsr	sc	fl				BIC (ex) SU	2	3	900				
Ia-IId1	rf-rt	sc					BIC (ex) SU	3	1	40				
VBq3	da	sc	fl			ex		2	2	40				
IIIBk	ds	sc	fl				(ex) SU	2	3	10				
IIIBk	ds	sc					BIC (ex)	3	3	50				
IIIBk	ds	sc					BIC (ex)	3	3	40				
IIIBk	ds	sc					BIC (ex)	3	3	60				
VBq3	da	sc	fl					1	1	250	1500			
VIs5	sr-ef	sc	fl	hm			on SU (ex)	3	1	110	365			
IIIBk	ds	sc				ex	SU?	2	2	30				
IIIAg	rxsr	sc	fl				SU?	3	4					
VBq3	da	sc	fl			ex	SU?	2	1	40				
IIIAg	rxsr	sc	fl				SU?	3	4					
VBq3	da	sc?	fl				BIC (ex) SU	3	3	350				
VBq3	da	sc	fl				ch BIC	2	2	40				
IIIAg	rxsr	sc	fl				SU	3	3	260				
IIIBk	ds	sc	fl				SU h	3	2	185				
VBq3	da	sc	fl				SU h	3	2	65				
VBqt	dt	sc	fl				SU h (ex) ch	3	1	50		85	325	

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0	4	0						20			SW88 18 92 83-84
40	1257	4	5027	27					30		5	SW88 18 93 109-111
935	675601	50	33780054	20	28				12	trb	5	SW88 18 93 109-111
80	5027	8	40212						4			SW88 18 93 109-111
40	1257	4	5027						4			SW88 18 93 109-111
40	1257	4	5027						4			SW88 18 93 109-111
130	37778	4	151111	13	27				70	trb?	x	SW88 18 94 147-148
1015	1120039	70	78402751	27	22				70		4	SW88 18 94 147-148
60	2827	4	11310	34					70		4	SW88 18 94 147-148
530	241432	30	7242959	23	18				70		x	SW88 18 94 147-148
2060	161792	5	808962	43	44				6	trb?	5	SW88 18 94 147-148
50	1964	5	9818						6			SW88 18 94 147-148
	0	40	0						70			SW88 18 94 147-148
95	3731	5	18653	39					70	home	5	SW88 18 94 147-148
100	11781	4	47124	22	23				70		5	SW88 18 94 147-148
200	31416	8	251328	22					70		5	SW88 18 95 180-181
200	32987	5	164934	22					70	Rainy C	4	SW88 18 95 180-181
900	307484	30	9224523	39	42				70	Rainy C	4	SW88 18 95 180-181
380	129827	35	4543932	22	22				70	trb2	4	SW88 18 95 180-181
450	38877	5	194387	50	28				70	Rainy C,home	4	SW88 18 95 180-181
150	21206	4	84823	39	28				70	home		SW88 18 95 180-181
1500	1060290	30	31808700	24	27				99	trb2	4	SW88 18 96 215-216
1260	39584	3	118752	30	39				55	trb2	4	SW88 18 96 215-216
40	1257	4	5027						99			SW88 18 96 215-216
150	1178	4	4712						99			SW88 18 96 215-216
63	2474	4	9896	22					70		x	SW88 18 96 215-216
55	1728	4	6912	42					70		5	SW88 18 96 215-216
70	3299	4	13195	34	25				70		x	SW88 18 96 215-216
150	29453	35	1030838	45	30	40	48		6	Rainy C	4	SW88 18 96 215-216
90	7775	5	38877	45	24				6	trb2	4	SW88 18 96 215-216
50	1178	4	4712						6			SW88 18 96 215-216
	0	20	0						6			SW88 18 96 215-216
40	1257	4	5027						6			SW88 18 96 215-216
	0	20	0						6			SW88 18 96 215-216
150	41234	3	123701	25	38				70	trb1	5	SW88 18 96 215-216
40	1257	4	5027	39	47				70			SW88 18 96 215-216
480	98018	25	2450448	39	47				70	Steffen C	4	SW88 18 94 146
150	21795	4	87179	28					70	Steffen C	4	SW88 18 94 146
45	2297	4	9189	33					70	Steffen C	4	SW88 18 94 153
60	2356	4	9425	35					70	Steffen C	4	SW88 18 94 146

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 05E	15F1		Steffen C	1600	220	Tvc		e	50		ss				3			
12 05E	15L1		Steffen C	1600	265	Tvc		e	50		ss				3			
12 05E	16D1		Steffen C	2400	225	Tvc		ese	50		ss				165			
12 05E	16D2		Steffen C	2440	225	Tvc		e	50		ss				165			
12 05E	16E1		Steffen C	2360	215	Tvc		e	50		ss				165			
12 05E	16G1		Steffen C	2200	145	Tvc		e	50		xs			pl?	147			
12 05E	16J1		Steffen C	1500	180	Tvc		e			xs				147			
12 05E	16J2		Steffen C	1400	160	Tvc		e			xs				147			
12 05E	16K1		Steffen C	1680	160	Tvc		e	50		xs			pl	147			
12 05E	16L1		Steffen C	2000	85	Tvc		e	50		ds				147			
12 05E	17B20	*	Johnson C	2000	270	Tva		ene	50		ss				3			
12 05E	17B21	*	Johnson C	2000	220	Tva		ene	50	55	ss				3			
12 05E	17B22	*	Johnson C	1980	220	Tva		ene		55	ss				3			
12 05E	17B23	*	Johnson C	2080	220	Tva		ene	50	55	ss				3			
12 05E	17B24	*	Johnson C	1900	220	Tva		ene		55	ss				3			
12 05E	17B25	*	Johnson C	1520	230	Tva		ene	21	55	ss				3			
12 05E	17B26	*	Johnson C	1520	230	Tva		ene		55	ss				3			
12 05E	17C20	*	Johnson C	1600	220	Tva		ene		55	ss				147			
12 05E	17C21	*	Johnson C	1860	165	Tva		ene		55	ss				3			
12 05E	17C22	*	Johnson C	1800	240	Tva		ene		55	ss				3			
12 05E	17C23	*	Johnson C	2000	290	Tva		ene		55	ss				3			
12 05E	17G1	*	Johnson C	1700	215	Tva		ene		55	ss				147			
12 05E	17H1	*	Sand C	2200	90	Tva		ene		55	ds				147	251		
12 05E	17K1	*	Johnson C	1560	260	Tva		e			ss		f		147			
12 05E	17L1	*	Johnson C	1220	270	Tva	Tpg	e			ss				147			
12 05E	17L2	*	Johnson C	1100	280	Tva	Tpg	e			ss				147			
12 05E	17L20	*	Johnson C	1600	260	Tva		ene			ss				3			
12 05E	17N1	*	Johnson C	1220	40	Tvc		sse		55		fa	f		147			
12 06E	04E1		Rainey C	1800	150	Tva2		se			ds	fa?			143			
12 06E	04E2		Rainey C	1640	100	Tva2		se			xs	fa?			143			
12 06E	04E21		Rainey C	1520	105	Tva2		se			xs	fa?			143			
12 06E	04G1		Rainey C	1560	110	Tva2		se			xs				144			
12 06E	04M1		Rainey C	1800	140	Tva2		se			xs				15			
12 06E	04M2		Rainey C	1700	90	Tva2		se			ds				143			
12 06E	04P1		Rainey C	1200	105	Tva2		se				fa?			136			
12 06E	05D20		Rainey C	2360	200	Tva2		se			xs				165			
12 06E	05D21		Rainey C	2600	285	Tva2		se			xs				165			
12 06E	05D22		Rainey C	2600	225	Tva2		se			xs				165			
12 06E	05E1		Rainey C	2300	250	Tva2		ese			ss				165			
12 06E	05M2	*	Rainey C	1800	235	Tva2		se			xs				15			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAg	rxsr	sc	fl				SUbg	3	2	325				
IIIAg	rxsr	sc	fl				SU dp	3	2	655				
VBqt	dt	sc	fl				sed (ex) h	3	3	60				
VBq3	da	sc				ex	bic	2	3	40				
VBq3	da	sc				ex	bic	2	3	40				
IIIBk	ds	sc	fl			ex	h	2	1	12	15			
VBqt	dt	sc	fl			ex	dp h SU	2	1	15				
VBqt	dt	sc	fl			ex	dp h SU	2	1	70		75	2500	
VBqt	dt	sc	fl				BIC sh h	3	3	100				
VIs5	sr-ef	sc?		hm			on	4	4	860				
IIIAg	rxsr	sc						4	4	600				
IIIBk-VII	ds-cb	sc	fl			ex		2	1	30				
VBq3-VII	ds-cb	sc	fl			ex		2	1	30				
VBq3-VII	ds-cb	sc	fl			ex		2	1	30				
VBqt	dt	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-sc	sc	fl				ch	3	2	30				
VBq3-VII	da-sc	sc	fl				ch	3	2	30				
VIs5	sr-ef	sc	fl				dp	4	1	100				
VBqt	dt	sc	fl				ch	2	2	30				
VBqt	dt	sc	fl				ch	2	1	30				
VBqt	dt	sc	fl				ch	2	1	30				
IIIBk-VII	ds-sc	sc	fl				ch h (ex)	2	1	80				
VIs5	sr-ef	sc		hm			gft	3	3	300				
IIIBk-VII	ds-sc	sc	fl			ex	dp h	2	2	320				
VIs5	sr-ef	sc	fl	hm	pr		gft on h	3	2	500	360			
VIs5	sr-ef	sc	fl			ex	dp	3	2	480				
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	30				
IIIAg	rxsr	sc	fl		pr			3	2	800				
IIIBk	ds	sc				ex		3	2	575				
IIIAh	dsr	sc	fl				on	3	3	150				
IIIBk	ds	sc	fl			ex		1	1	40				
VBq3-VII	da-sc	sc	fl				(ex) ch	2	1	50				
VBqt	dt	sc				ex	dp (ex)	3	4	30		2000		
VBqt	dt	sc					BIC ch	3	3	30				
IIIBk	ds	sc	fl				(ex) sed	2	3	20				
VBqt	dt	sc	fl			ex	ch sed	1	1	40				
VBqt	dt	sc	fl			ex	ch sed	1	1	40				
IIIAg	rxsr	sc	fl				on SU	3	2					
VBq3	da	sc	fl			ex		2	1	90				
VBq3	da	sc	fl			ex	ch	2	1	40				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
390	99549	15	1493242	44	55				70	Steffen C	3	SW88 18 94 146
2970	1527878	15	22918168	55	42				70	Steffen C		SW88 18 94 146
60	2827	4	11310	30	28				70			SW88 18 93 107-109
40	1257	4	5027						70			SW88 18 93 107-109
40	1257	4	5027						70			SW88 18 93 107-109
15	141	4	565	39					4	trb1	5	SW88 18 93 107-109
50	589	4	2356	22					23	Steffen C,trb1	4	SW88 18 93 107-109
100	5498	4	21991	32					23	Steffen C,trb1	4	SW-C-78 47D-18
50	3927	4	15708	11					23	trb1	4	SW-C-78 47D-18
774	522794	50	26139683	22	25				4	trb1	3	SW88 18 93 107-109
400	188496	40	7539840						8			SW88 18 92 81-82
400	9425	3	28274						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
100	7854	20	157080						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
30	707	4	2827						8			SW88 18 92 81-82
40	2513	4	10053	18					8		x	SW88 18 92 81-82
300	70686	20	1413720						8	Sand C		SW88 18 92 81-82
60	15080	4	60319	34					88		x	SW88 18 92 81-82
640	251328	40	10053120	23	39				1	trb1	5	SW88 18 92 81-82
680	256355	40	10254182	34	37				8		5	SW-C-78 46B 34
400	9425	30	282744						1			SW88 18 92 81-82
800	502656	4	2010624	42	23				8	Interstate 12		SW88 18 92 81-82
600	270963	4	1083852	30					25		5	SW88 19 99 58-59
150	17672	30	530145						25			SW88 19 99 58-59
20	628	4	2513						25			SW88 19 99 58-59
35	1374	4	5498						75			SW88 19 99 58-59
25	589	2	1178	32					75	Kiona C	5	SW88 19 99 58-59
30	707	3	2121						25			SW88 19 99 58-59
25	393	4	1571						25			SW88 19 99 58-59
40	1257	4	5027						25			SW88 19 98 24
40	1257	4	5027						75			SW88 19 98 24
	0	70	0						25			SW88 19 98 24
40	2827	4	11310	32	37				25	Rainey C	4	SW88 19 98 24
40	1257	4	5027						25			SW88 19 98 24

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 06E	05M2	*	Rainey C	1960	270	Tva2		se			xs				15			
12 06E	05Q1		Rainey C	2000	175	Tva2		se			ss	fa?			60	24		
12 06E	06B1		Rainey C	3400	60	Tva2		s	36	20	xs				184		165	
12 06E	06B20		Rainey C	2940	80	Tva2		s	5	36	xs				184			
12 06E	06B21		Rainey C	2880	40	Tva2		s	5	36	xs				184			
12 06E	06B22		Rainey C	3040	115	Tva2		s	5	36	xs				165			
12 06E	06B23		Rainey C	2240	110	Tva2		s	5	36	xs				165			
12 06E	06E1	*	Rainey C	3160	165	Tva2	Toh	s	36	20	xs				14	15	24	25
12 06E	06H1		Rainey C	2400	110	Tva2		s	36		ss				150			
12 06E	06H20		Rainey C	2720	120	Tva2		s	5	36	xs				165			
12 06E	06H21		Rainey C	2800	165	Tva2		s	5	36	ds				15		14	
12 06E	06H22		Rainey C	2920	120	Tva2		s	5	36	xs				165			
12 06E	06L1	*	Rainey C	2600	150	Tva2		s	36		xs				24		60	
12 06E	06P1	*	Rainey C	2300	160	Tva2		s	5		xs				24			
12 06E	06P2	*	Rainey C	2100	215	Tva2		s	36		ds				14	25		
12 06E	06P3	*	Rainey C	2600	180	Tva2		s	36		ds				14			
12 06E	06Q1	*	Rainey C	2000	70	Tva2		s	36		ss				15			
12 06E	06Q20	*	Rainey C	1880	50	Tva2		s	36		xs				15			
12 06E	06R20	*	Rainey C	1700	290	Tva2		s	5	36	xs				15			
12 06E	07A1		Rainey C	1400	265	Tva2		s	35	5	xs			pl?	144			
12 06E	07D1		Rainey C	1800	160	Tva2		s	35	5	xs			pl?	60			
12 06E	07H1		Rainey C	1300	265	Tva2		s	35	5	ds				143	144	137	
12 06E	08E1		Rainey C	1000	260	Tva2					ds	fa			144			
12 06E	08F1		Rainey C	900	265	Tva2					ds	fa			144			
12 06E	08H20		Rainey C	1680	10	Tvb3		ssw			ss				3			
12 06E	08H21		Rainey C	1600	20	Tvb3		ssw			ss				3			
12 06E	08H22		Rainey C	1600	15	Tvb3		ssw			ss				3			
12 06E	08K1		Rainey C	1600	235	Tva2		ssw			xs				60			
12 06E	08K2		Rainey C	1600	300	Tvb3		ssw			xs				60			
12 06E	08R20		Rainey C	1600	5	Tvb3		ssw			ss				3			
13 04E	01A1	*	WF Tilton	2900	225	Tva		se			ss	fa			215			
13 04E	01A2	*	WF Tilton	3000	230	Tpg	Tva	se			ss				163			
13 04E	01F1	*	WF Tilton	2200	170	Tpg		wnw			ss	fa			56			
13 04E	01H1		WF Tilton	2760	265	Tpg	Tva	e			ss				219			
13 04E	01H20	*	WF Tilton	2440	265	Tpg		e			ss				231			
13 04E	01J1	*	WF Tilton	2700	275	Tpg	Tva	e			ss				219			
13 04E	01J20	*	WF Tilton	2880	200	Ti		n			xs				232	219		
13 04E	01J30	*	WF Tilton	2680	260	Ti		n			xs				219			
13 04E	01K1		WF Tilton	2600	190	Tpg	Qls	ese	45		xs	fa			162	163		
13 04E	01R1	*	WF Tilton	2460	260	Tpg		ese	45		ss				232			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAg	rxsr	sc	fl				SU on	3	2					
IIIAg	rxsr	sc	fl		pr?		SU?	3	2	800				
Ia-IId1	rf-rt	sc				ex	c t ch	1	1	100				
VBq3	da	sc	fl			ex	ch BIC sed	2	1	30				
VBq3	da	sc	fl			ex	ch BIC sed	2	1	30				
VBq3	da	sc	fl			ex	ch BIC sed	2	1	30				
VBq3	da	sc	fl			ex	ch BIC sed	2	1	400				
VIs5	sr-ef	sc	fl	hm			on h?	4	3	2110	2555			
IIIAg	rxsr	sc	fl				on (ex) SU	4	2	750				
VBq3	da	sc	fl			ex	ch	2	2	30				
VIs5	sr-ef	sc	fl	hm				4	3	30				
VBq3	da	sc					(ex) ch	2	3	30				
VBq3	da	sc	fl				(ex) BIC	2	1	90				
VBgf	df	sc	fl			ex	sed ch dp	1	1	90		100	915	
IIIBk	ds	sc	fl				dp (ex)	2	1	85	175			
VIs5	sr-ef	sc	fl	hm			on hd	2	1	397				
IIIAg	rxsr	sc	fl		pr		(ex) SU	4	3	560				
VBq3	da	sc	fl			ex	ch	2	1	20				
VBq3	da	sc	fl			ex	ch	1	2	30				
IIIAg	rxsr	sc	fl				bg SU	3	2	350				
VBqt	dt	sc	fl			ex	dp ch h af	2	1	60		255	1980	
IIIAg	rxsr	sc	fl				I SU	3	2	456				
VBq3	da	sc	fl			ex	dp	2	1	40				
IIIBk	ds	sc	fl			ex	dp	2	1	35				
VBq3	da	sc					ch BIC	3	2	25				
VBq3	da	sc					ch BIC	3	2	25				
VBq3	da	sc					ch BIC	3	2	25				
VIs5	sr-ef	sc	fl	hm				4	3	470				
VBq3	da	sc	fl			ex	ch	2	1	60				
IIIAg	rxsr	sc	fl				hw	3	3	110				
IIIBk-VII	ds-sc	sc				ex	SU	2	1	70				
IIIBk-VII	ds-sc	sc	fl			ex		2	2	259				
IIIBk	ds	sc?					(ex) hw	3	2	172				
IIIBk-VII	ds-sc	sc	fl			ex		3	2	216				
VBqf	df	sc				ex		1	1	20				
VII-IIIBk	ds-cb	sc	fl			ex		2	1	121				
VBqt	dt	sc	fl			ex		1	1	433				
VBqf	df	sc	fl			ex		2	2	250				
VIs5	sr-ef	sc		hm				4	2	1078				
Ia-IId1	rf-rt	sc	fl	hm			(ex) i	3	2	390				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0	60	0						25			SW88 19 98 24
350	219912	45	9896040	39	36				6	Hwy 12	4	SW88 19 98 24
1055	82860	4	331439	51					35	Rainy C	1	SW88 18 97 256
40	942	4	3770						35			SW88 18 97 256
40	942	4	3770						35			SW88 18 97 256
40	942	4	3770						60			SW88 18 97 256
40	12566	4	50266						35			SW88 18 97 256
1950	3231528	120	387783396	27	21				15		1	SW-C-78 49B 33
475	279799	80	22383900	30	38				35	Rainy C	1	SW88 18 97 256
30	707	4	2827						35			SW88 18 97 256
3000	70686	60	4241160						35			SW88 18 97 256
30	707	4	2827						35			SW88 18 97 256
90	6362	1	6362	32	28	40	45		35		5	SW-C-78 49B 33
45	3181	8	25447	33		5	41		4	trb?	5	SW88 18 97 256
80	5341	6	32044	34	22	23			4		5	SW-C-78 49B 33
516	160891	110	17697984	27	28	23	28		4		5	SW88 18 97 256
680	299080	90	26917229	39	34		36		4	trb	3	SW88 18 97 256
10	157	2	314			49			4			SW88 18 97 256
30	707	4	2827						35			SW88 18 97 256
650	178679	45	8040533	35	30				99	Rainy C	1	SW88 18 97 254
65	3063	5	15315	28					15	home,trb	3	SW88 18 97 254
600	214885	45	9669845	25	26				99	Rainy C	1	SW88 18 97 254
47	1477	4	5906	36					32			SW-C-78 49B-33
67	1842	4	7367	39					32			SW-C-78 49B-33
35	687	4	2749						32			SW88 17 90 134-135
35	687	4	2749						32			SW88 17 90 134-135
35	687	4	2749						32			SW88 17 90 134-135
670	247322	65	16075960	30	22				32			SW88 17 90 134-135
60	2827	4	11310	33					32			SW-C-78 49B-33
120	10367	15	155509						32			SW88 17 90 134-135
110	6048	3	18143	39					14	trb1	5	SW88 17 90 134-135
172	34988	3	104964	34	28				14		5	SW-C-78 45C-36
110	14860	4	59439	31	28				90		x	SW88 17 90 134-135
78	13232	4	52930	37					14		4	SW-C-78 45C-36
10	157	4	628						14			SW88 17 90 134-135
190	18056	4	72225	43					14	trb1,Tilton R	5	SW88 17 90 134-135
100	34008	4	136031			49	47		14			SW88 17 90 134-135
75	14726	6	88358						14			SW88 17 90 134-135
1900	1608656	4	6434625	35	22				90	trb2,Tilton R	4	SW88 17 90 134-135
715	219009	4	876035	25	39				90	trb1,WF Tilton R	4	SW88 17 90 134-135

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 04E	01R2		WF Tilton	2140	260	Tpg	Qls								232	231		
13 04E	01R20	*	WF Tilton	2140	138	Tpg					xs				219	232		
13 04E	01R21		WF Tilton	2440	200	Tpg					xs				219			
13 04E	01R22	*	WF Tilton	2560	285	Tpg		se			xs				232			
13 04E	01R23	*	WF Tilton	2440	295	Tpg									232			
13 04E	01R24	*	WF Tilton	2280	170	Tpg									232			
13 04E	02C1	*	WF Tilton	2240	175	Tpg	Qls	sw			xs	fa?			163	235		
13 04E	02C20	*	WF Tilton	1640	20	Tpg		sw							161			
13 04E	02C21	*	WF Tilton	1680	20	Tpg		sw							161			
13 04E	02C22	*	WF Tilton	2040	255	Tpg		sw							164			
13 04E	02C23	*	WF Tilton	2160	220	Tpg		sw							163			
13 04E	02C24	*	WF Tilton	2080	250	Tpg		sw							231			
13 04E	02D1		WF Tilton	2140	210	Tpg		sw			ds				235			
13 04E	02E1		WF Tilton	2200	175	Tpg		sw					f?		231			
13 04E	02F1	*	WF Tilton	1700	320	Tpg		sw			ss				4			
13 04E	02F20	*	WF Tilton	1820	10	Tpg		sw							231			
13 04E	02H20	*	WF Tilton	1680	120	Tpg		sw	42						126	160		
13 04E	02J20	*	WF Tilton	1680	40	Qdht		sw							136			
13 04E	02J21	*	WF Tilton	1600	40	Tpg		sw							231			
13 04E	02J22	*	WF Tilton	1680	65	Tpg		sw				fa			161			
13 04E	02M1		WF Tilton	2200	70	Tpg		sw			ss				161			
13 04E	02N1		WF Tilton	2400	65	Tpg		sw			ss				161	163		
13 04E	11A20	*	Snow C	1760	350	Tpg		sw	26						52			
13 04E	11B1	*	Snow C	2600	90	Tpg		sw	26		xs				161			
13 04E	11F1	*	Snow C	1640	230	Tpg		sw	26		ds		f		160	161		
13 04E	11G1	*	Snow C	2260	195	Tpg		sw	26		ds				160			
13 04E	11G20	*	Snow C	2240	170	Tpg		sw	26						251			
13 04E	11K1		Snow C	1640	45	Tpg		sw	26						160			
13 04E	12A1	*	WF Tilton	2100	270	Qls		ese	26			fa			231			
13 04E	12B1	*	WF Tilton	2200	110	Qls	Tpg	wn	26	21					231			
13 04E	12E1		WF Tilton	1550	50	Qls	Tpg	wn	26		ss				52	161		
13 04E	12F1	*	WF Tilton	1600	255	Qls	Tpg	wn	26		ss				52			
13 04E	12F20	*	WF Tilton	1800	215	Qls		wn	26						231			
13 04E	12G1	*	WF Tilton	2000	260	Qls	Tpg	wn	26		ss				52			
13 04E	12G20	*	WF Tilton	1920	270	Qls		wn	47						52	161		
13 04E	12G21	*	WF Tilton	1800	215	Qls									161			
13 04E	12G3	*	WF Tilton	1900	275	Qls	Tpg	wn	26		ss				52			
13 04E	12H20	*	WF Tilton	2280	220	Qls									50	231		
13 04E	12L20	*	WF Tilton	1440	50	Qls									52			
13 04E	12L21	*	WF Tilton	1520	145	Qls									52	230		

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAg	rxsr	sc					(ex) i	3	2	660				
IIIBk	ds	sc	fl	hm				1	1	600	400			
IIIBk-VII	ds-rd							3	1	43				
IIIBK-VII	ds-sc							3	2	30				
IIIBK-VII	ds-sc	sc				ex		2	1	25				
IIIBK	ds	sc	fl			ex	su	2	1	30				
IIIAg	rxsr	sc	fl				(ex)	4	4	2010				
IIIBK	ds					ex		1	1	30				
Ia-IId1	rt-rf					ex		1	1	50				
IIIBK	ds							2	3	30				
IIIBK	ds							2	3	30				
IIIBK	ds							2	2	30				
IIIBk	ds	sc	fl			ex	SU	2	1	125				
IIIBk	ds	sc					(ex)	2	2	85				
VBq3	da	sc	fl			ex	SU	2	1	85				
VBqt	dt						ch dp hw	3	3	30				
IIIAh	dsr							4	4	291				
IIIAh	dsr	sc	fl			ex	hd hw su	3	2	126				
VBq3-VII	da-rd	sc	fl			ex	ch	2	1	40				
VBqt	dt	sc				ex	ch dp	2	1	84		40		
VBq3	da	sc	fl				hw sh ch	3	3	210				
IIIBk	ds	sc	fl				hw sh ch (ex)	3	3	335				
VBq3	da	sc	fl			ex		2	2	20				
VBq3	da	sc					sh hw	3	4	215				
VBqt	dt	sc	fl			ex	ch dp	2	1	108		120		
IIIAg	rxsr	sc	fl		pr?			2	1	1510				
VBq3	da	sc	fl					3	1	43				
IIIBk	ds	sc?	fl					3	4	22				
VIs5	sr-ef	sc		hm			gft l	4	1	1100	1000			
VIs5	sr-ef	sc	fl					4	4	330				
IIIAg	dsr	sc	fl		pr		on l	3	3	735				
VIs5	sr-ef	sc	fl	hm				4	3	858				
IIIBK-VIII	ds-cb	sc	fl			ex		3	1	436				
VIs5	sr-ef	sc	fl	hm				4	3	1100	880			
VBq3	da	sc	fl					3	1	349				
VBq3	da	sc	fl					3	1	262				
VBq3	ds-sc	sc				ex	f	2	1	220				
IIIAg	rxsr	sc	fl					3	1	567				
IIIAh	dsr						su	3	3	305				
IIIAh	dsr							3	3	610				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
275	142550	4	570200	22	14				90	trb1,WF Tilton R	4	SW88 17 90 134-135
400	188496	100	18849600			26	90		14			SW88 17 90 134-135
100	3377	15	50658			40			14			SW88 17 90 134-135
30	707	4	2827						14			SW88 17 90 134-135
20	393	2	785			45			14			SW88 17 90 134-135
10	236	2	471						14			SW88 17 90 134-135
1240	1957531	50	97876548	42	34				20	WF Tilton R	3	SW88 17 89 65-66
10	236	2	471						20	Tilton R		SW88 17 89 65-66
50	1964	2	3927						20			SW88 17 89 65-66
64	1508	4	6032						90			SW88 17 89 65-66
83	1956	4	7823						90			SW88 17 89 65-66
166	3921	4	15683						20			SW88 17 89 65-66
85	8345	4	33380	39					20	trb1	5	SW88 17 89 65-66
375	25035	4	100139	45					20	trb1	5	SW88 17 89 65-66
85	5675	4	22698	45					20	WF Tilton R	3	SW88 17 89 65-66
20	471	4	1885						20	trb		SW88 17 89 65-66
582	133017	50	6650846						90			SW88 17 89 65-66
	0	20	0			38			30	WF Tilton R		SW88 17 89 65-66
40	1257	5	6283				38		4	WF Tilton R		SW88 17 89 65-66
40	2639	5	13195						20	trb		SW88 17 89 65-66
165	27214	4	108856	34	28				20	trb1	5	SW88 17 89 65-66
190	49991	4	199963	27	39				20	trb1	5	SW88 17 89 65-66
20	314	4	1257						15			SW88 17 89 63-64
345	58257	4	233028	30	28				15		5	SW88 17 89 63-64
95	8058	4	32233	39					6	rd,Snow C	3	SW88 17 89 63-64
650	770870	70	53960907	32	20	35			6		3	SW88 17 89 63-64
20	675	4	2702			45			6			SW88 17 89 63-64
22	380	4	1521	27					20			SW88 17 89 63-64
1540	1330468	50	66523380	15	18				3	Tilton R	1	SW88 17 90 132-133
385	99785	50	4989254	29	22				3	Tilton R	4	SW88 17 90 132-133
1250	721586	30	21647588	30	16				18	Tilton R	2	SW88 17 90 132-133
1200	808648	50	40432392	22	22				3	Tilton R	2	SW88 17 90 132-133
40	13697	4	54790			53			3			SW88 17 90 132-133
2200	1900668	4	7602672	18	17				3	Tilton R	1	SW88 17 90 132-133
40	10964	10	109642						3			SW88 17 90 132-133
80	16462	10	164620						3			SW88 17 90 132-133
110	19007	4	76027	53					3	Tilton R	5	SW88 17 90 132-133
	0		0						3			SW88 17 90 132-133
	0		0						90			SW88 17 90 132-133
	0		0						18			SW88 17 90 132-133

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 04E	12N20	*	WF Tilton	1720	105	Qls	Tpg								160			
13 04E	12Q1	*	WF Tilton	1900	180	Qls	Tpg								52			
13 04E	12Q2	*	WF Tilton	1900	270	Qls	Tpg								52			
13 04E	12Q20	*	WF Tilton	1460	180	Qls									52			
13 04E	13B1	*	WF Tilton	1600	235	Qls					ds				52			
13 04E	13F1	*	WF Tilton	1520	35	Tpg					ss		f		50	52	235	
13 04E	13F20	*	WF Tilton	1240	35	Tpg									235			
13 04E	13F21	*	WF Tilton	1240	35	Tpg									52		235	
13 04E	13H1	*	WF Tilton	1440	235	Qls					ds				46	47		
13 04E	13J1	*	WF Tilton	1320	220	Tpg		e			xs				147	146	49	
13 04E	13K1	*	WF Tilton	1800	120	Tpg							f		52			
13 04E	13K2	*	WF Tilton	1440	90	Tpg									52			
13 04E	13K20	*	WF Tilton	1280	180	Tpg							f		52			
13 04E	13Q1	*	WF Tilton	1600	30	Tpg					ss				52			
13 04E	13Q2	*	WF Tilton	1500	15	Tpg					ss				232			
13 04E	13Q20	*	WF Tilton	1400	65	Tpg									231			
13 04E	13Q22	*	WF Tilton	1400	30	Tpg									231			
13 04E	13Q3	*	WF Tilton	65	65	Tpg					ss				231			
13 04E	13Q4	*	WF Tilton	1400	65	Tpg									231			
13 04E	13R20	*	WF Tilton	1240	60	Tpg									234			
13 04E	14A1		WF Tilton	1800	360	Tpg							f		231			
13 04E	14L1		Coon C	2140	35	Tpg		w			xs	fa			232			
13 04E	14L2		Coon C	2100	285	Tpg		w			xs	fa			232			
13 04E	14L20	*	Coon C	80	25	Tpg		w			xs	fa			232			
13 04E	14L21	*	Coon C	1960	70	Tpg		w				fa			231			
13 04E	14L3	*	Coon C	1900	90	Tpg		w			ds	fa			232			
13 04E	14L4	*	Coon C	2100	330	Tpg		w			xs	fa			232	163		
13 04E	14M1	*	Coon C	2620	5	Tpg		w			xs	fa			164			
13 04E	14M2	*	Coon C	2200	65	Tpg		w	25		ds	fa			163			
13 04E	14M2	*	Coon C	2160	65	Tpg		w			ds	fa			106			
13 04E	14N1	*	Coon C	2620	35	Tpg		ne			xs	fa			163	164		
13 04E	23A20	*	WF Tilton	2520	80	Tpg		wsw		40	ss	fa			232	251		
13 04E	23E1		Connelly C	2000	230	Tpg					ds	fa			126			
13 04E	23E2	*	Connelly C	1900	90	Tpg					xs	fa			126			
13 04E	23E20	*	Connelly C	200	120	Tpg		ssw				fa			126			
13 04E	23E21	*	Connelly C	1920	345	Qdht		ssw				fa			231			
13 04E	23E22	*	Connelly C	1960	310	Qdht		ssw				fa			126	231		
13 04E	23E23	*	Connelly C	1920	316	Qdht		ssw				fa			231			
13 04E	23E24	*	Connelly C	2080	105	Tpg		sw				fa			126			
13 04E	23E25	*	Connelly C	1960	350	Qdht						fa			231			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAh	dsr						su	3	2	436				
IIIBk-VII	ds-sc	sc				ex	f dp	2	1	90	110	390		
VIs5	sr-ef	sc	fl	hm				4	4	550	550			
VBq3-VII	da-ld	sc	fl			ex		2	2	30				
IIIAg	rxsr	sc	fl				hd	4	3	1200				
IIIAg	rxsr	sc	fl				i SU	4	4	815				
VBq3	da	sc	fl				ch	3	3	100				
VBq3	da							3	2	50				
IIIAg	rxsr	sc	fl					4	3	1140				
IIIAg	rxsr	sc	fl					4	3	589				
IIIAg	rxsr	sc	fl					4	1	770				
IIIAq	rxsr	sc	fl				su	4	4					
VBq3	da	sc	fl			ex		2	2	362				
VBqt-VII	dt-rd	sc	fl			ex	dp	2	1	100		100	1500	
IIIBk-VII	dt-sc	sc	fl			ex	dp	2	1	159		220	1090	
VIS5	sr-ef	sc						4	1					
VBqt	dt	sc	fl			ex	ch	2	1	60		60		
VBq3-VII	da	sc	fl				ch	2	1	20				
IIIBk-VII	ds-sc	sc	fl				ch	2	1	227				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex	dp l sh	2	1	70				
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	200	175			
VBq3	da	sc	fl			ex		2	1	45	85			
IIIBk-VII	ds-cb	sc	fl			ex	dp	1	1	80				
VBq3	da	sc	fl			ex	ch	3	1	20				
IIIBk	ds	sc	fl			ex		2	1	45				
VBq3	da	sc	fl			ex		2	1	10	170			
VBq3	da	sc	fl			ex	ch	2	1	150	390			
VBq3-VII	da-rd	sc	fl			ex	ch	2	1	40	300			
VBq3-VII	da-rd	sc	fl	l		ex		1	1	70				
IIIAg	rxsr	sc	fl		pr?		on	4	2	950				
IIIAg	rxsr	sc						2	4	498				
IIIBk-VII	ds-sc	sc	fl			ex		2	1	80	45			
VBq3	da	sc	fl			ex	dp	2	1	25	45			
IIIBk-VII	ds-sc	sc				ex		2	1	20				
IIIBk	ds	sc	fl			ex		2	1	35				
IIIAg	rxsr	sc	fl				su	2	2	100				
VBq3	da	sc	fl			ex		2	1	40				
VBq3-VII	da-sc	sc	fl			ex		2	1	45				
IIIBk	ds	sc	fl					2	2	300				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0		0						90			SW88 17 90 132-133
90	6362	4	25447	12					3	Tilton R	5	SW88 17 90 132-133
715	308859	4	1235434	23	17				3	Tilton R	1	SW88 17 90 132-133
30	707	4	2827						3			SW88 17 90 132-133
1720	1621066	50	81053280	16	28				3	EF Tilton R	1	SW88 17 90 130-131
634	405824	50	20291202	30	34				25		1	SW88 17 90 130-131
420	32987	5	164934			60			25	WF Tilton R		SW88 17 90 130-131
60	2356	4	9425						25			SW88 17 90 130-131
570	510353	40	20414117	27	22				25	EF Tilton R	1	SW88 17 90 130-131
589	272472	40	10898870	22	20				25		1	SW88 17 90 130-131
725	438450	70	30691469	29	30				25		1	SW88 17 90 130-131
498	0	40	0	39	26				25			SW88 17 90 130-131
120	34118	5	170589						25		5	SW88 17 90 130-131
30	2356	4	9425	34		30			15	trb,Tilton R	4	SW88 17 90 130-131
50	6244	4	24976	53					15	trb,Tilton R	4	SW88 17 90 130-131
	0	50	0						15	trb		SW88 17 90 130-131
30	1414	5	7069						15			SW88 17 90 130-131
10	157	4	628	53	36				15	trb	4	SW88 17 90 130-131
227	40471	5	202354	53	36				15	trb	4	SW88 17 90 130-131
30	707	4	2827						15			SW88 17 90 130-131
65	3574	4	14294	22					70	WF Tilton R	3	SW-C-78 34C34
130	20420	4	81682	29	40				10	trb1	4	SW88 17 89 59-61
130	4595	4	18378	39		45			10	trb1	4	SW88 17 89 59-61
70	4398	4	17593				40		10	rd		SW88 17 89 59-61
20	314	4	1257			45	50		10	trb		SW88 17 89 59-61
20	707	4	2827	22					10	trb1	4	SW88 17 89 59-61
40	314	4	1257	31		45			10	trb1	4	SW88 17 89 59-61
50	5891	6	35343	18		43			10	trb1	4	SW88 17 89 59-61
45	1414	5	7069	45					10	trb1	4	SW88 17 89 59-61
40	2199	4	8796						10	trb		SW88 17 89 59-61
820	611827	10	6118266	30	34				10		4	SW88 17 89 59-61
	0	50	0						70			SW88 17 89 59-61
35	2199	3	6597	39		57			8		4	SW88 17 89 59-61
35	687	4	2749	42		47	48		8		4	SW88 17 89 59-61
100	1571	4	6283						8			SW88 17 89 59-61
20	550	4	2199						8			SW88 17 89 59-61
120	9425	15	141372			29			8			SW88 17 89 59-61
25	785	6	4712			36	38		8			SW88 17 89 59-61
35	1237	4	4948						8			SW88 17 89 59-61
120	28274	4	113098			47			8			SW88 17 89 59-61

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 04E	23E3	*	Connelly C	1840	180	Qdht		ssw				fa			198			
13 04E	23G20		Connelly C	2200	260	Tpg						fa			250			
13 04E	23K1		Connelly C	2100	245	Tpg						fa			231		126	
13 04E	23K20		Connelly C	1760	260	Tpg					ss	fa			231			
13 04E	23K21		Connelly C	1760	200	Tpg					ss	fa			123			
13 04E	23L1	*	Connelly C	1800	267	Tpg		ne				fa			231			
13 04E	23L2	*	Connelly C	1760	280	Tpg		ne		63		fa			231			
13 04E	23L21	*	Connelly C	1760	254	Tpg		ne				fa			231			
13 04E	23M1	*	Connelly C	1700	255	Tpg		ne				fa			231			
13 04E	23P20	*	Connelly C	1400	170	Tpg		ne		53	xs				126			
13 04E	23P21	*	Connelly C	1400	180	Tpg		ne			xs				126			
13 04E	23P22	*	Connelly C	1460	180	Tpg		ne			xs				126			
13 04E	23P23	*	Connelly C	1480	200	Tpg		ne			xs				126			
13 04E	23P24	*	Connelly C	1540	180	Tpg		ne			xs				126			
13 04E	23P25	*	Connelly C			Tpg		ne							231			
13 04E	23R1	*	Connelly C	1800	190	Tpg		nne			ds	fa			231			
13 04E	23R2	*	Connelly C	1840	260	Tpg		nne	20		ds	fa			231			
13 04E	23R20	*	Connelly C	1520	60	Tpg									231			
13 04E	23R21	*	Connelly C	1560	60	Tpg									231			
13 04E	23R3	*	Connelly C	1520	250	Tpg		nn	20		ds	fa			231			
13 04E	24A1	*	Tilton R	1700	150	Tpg		sw		40	xs	fa			231			
13 04E	24E1	*	Tilton R	2000	90	Tpg		sw		34			f		232			
13 04E	24E21	*	Tilton R	2120	140	Tpg		sw		34	xs			pl	232			
13 04E	24E22	*	Tilton R	2200	90	Tpg		sw		34					232			
13 04E	24E23	*	Tilton R	2120	35	Tpg		sw		34	ss				232			
13 04E	24E24	*	Tilton R	1960	40	Qdht		sw		34	ss				231			
13 04E	24E25	*	Tilton R	2400	135	Qdht		sw		34	xs		f		232			
13 04E	24M1	*	Tilton R	2200	165	Tpg		sw		34	ds				231	232		
13 04E	24M2	*	Tilton R	1760	245	Qdht		sw		34	ds	fa			232			
13 04E	24M2	*	Tilton R	1920	200	Qdht		sw		34	ds	fa			231			
13 04E	24M2	*	Tilton R	1920	190	Tpg		sw		34	ds	fa			231			
13 04E	24M2	*	Tilton R	1680	170	Tpg		sw		34	ds	fa			231			
13 04E	24M2	*	Tilton R	1680	180	Tpg		sw		34	ds	fa			232			
13 04E	25B1	*	Tilton R	1200	120	Qdht		ne		50	xs				148			
13 04E	25F1	*	Tilton R	1100	120	Qdht		ne		50	xs	fa			126	123		
13 04E	25M1	*	Tilton R	1350	120	Qdht					xs	fa			230			
13 04E	25N1	*	Tilton R	1400	110	Qdht					xs	fa			230			
13 04E	26B1	*	Tilton R	1680	40	Tpg		ne							126			
13 04E	26K20	*	Tilton R	1800	240	Tpg						fa			231			
13 04E	26L1	*	Connelly C	1100	270	Tpg		sw			xs	fa			136	126		

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl			ex		2	1	40				
IIIAg	rxsr	sc	fl					4	4					
VIs5	sr-ef	sc	fl	hm	pr		SU hw on	3	1	3080				
IIIBk	ds	sc	fl			ex	on	1	1	60				
IIIBk	ds	sc	fl			ex		1	1	40				
IIIAg	rxsr	sc	fl				on SU	3	3	198				
IIIBk	ds	sc	fl			ex		1	1	110				
VBq3-VII	da-sc	sc	fl			ex		2	1	20				
IIIAg	rxsr	sc	fl				hd su	4	3	264				
IIIAh	dsr	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	20				
VBq3	da	sc	fl			ex		2	1	20				
VBq3	da	sc	fl			ex		2	1	20				
VBq3	da	sc	fl			ex		2	1	20				
VBq3	da	sc	fl			ex		2	1					
IIIAg	rxsr	sc	fl					3	1	484				
IIIAg	rxsr	sc	fl					3	3					
VBq3	da							3	2	80				
VBq3	da							3	2	60				
IIIAg	rxsr	sc	fl					3	3					
VIs5	sr-ef	sc	fl	hm				4	4	575	1140			
VBqt-VII	dt-sc	sc				ex	hw dp ch	2	2	20		60		
VBqt-VII	dt-rd	sc	fl			ex	ch dp	1	1	20				
VBq3	da	sc	fl					3	1	30				
VBq3	da	sc	fl					3	4	30				
VBq3	da	sc	fl					3	4	30				
VBq3	ds-cb	sc	fl					1	4	150				
IIIAg	rxsr		fl		pr		on	3	3	1140				
VIs5	sr-ef	sc	fl					3	2					
IIIAg	rxsr	sc	fl					3	1					
IIIAg	rxsr	sc	fl					3	1					
IIIAg	rxsr	sc	fl					3	1					
VBq3	da	sc	fl					2	1	30				
IIIAh	dsr	sc	fl				SU sh hw	3	3	690				
IIIAh	dsr	sc?	fl				SU (ex) sh hw	3	3	460				
IIIAh	dsr	sc?	fl				SU	3	3	1600				
IIIAh	dsr	sc?	fl				SU	3	3	920				
IIIAg	rxsr	sc			pr			3	2	90				
IIIBk-VII	ds	sc	fl			ex	dp	2	1	50				
IIIBk-VII	ds-cb	sc	fl			ex		2	1	45				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
40	1257	4	5027			44			8			SW88 17 89 59-61
20	0	125	0			15			70			SW88 17 89 59-61
1230	2975409	80	238032749	21	17	23	25		70	Connelly C	2	SW88 17 89 59-61
40	1885	3	5655						5			SW88 17 89 59-61
30	942	3	2827						5			SW88 17 89 59-61
440	68424	20	1368481	22	47	24	40		5			SW88 17 89 59-61
88	7603	4	30411	53		52			70		4	SW88 17 89 59-61
20	314	4	1257			46			5			SW88 17 89 59-61
308	63862	30	1915873	37	29	14	48		8	Heller C	4	SW88 17 89 59-61
30	707	10	7069						5	trb		SW88 17 89 59-61
20	314	4	1257						5	trb		SW88 17 89 59-61
20	314	4	1257						5	trb		SW88 17 89 59-61
20	314	4	1257						5	trb		SW88 17 89 59-61
20	314	4	1257						5	trb		SW88 17 89 59-61
	0		0						5			SW88 17 89 59-61
1320	501776	15	7526645	28	20				4		4	SW88 17 89 59-61
	0	15	0						6			SW88 17 89 59-61
100	6283	4	25133						4			SW88 17 89 59-61
60	2827	4	11310						4			SW88 17 89 59-61
	0	15	0						70			SW88 17 89 59-61
460	207738	50	10386915	20	24				5	Tilton R	1	SW88 17 90 127-128
45	707	6	4241	50					1	Tilton R	4	SW88 17 90 127-128
20	314	4	1257						1	trb		SW88 17 90 127-128
50	1178	8	9425						1			SW88 17 90 127-128
50	1178	8	9425						1			SW88 17 90 127-128
50	1178	8	9425						1			SW88 17 90 127-128
130	15315	8	122522						1			SW88 17 90 127-128
575	514830	15	7722446	18	17				4		1	SW88 17 90 127-128
	0	15	0						4			SW88 17 90 127-128
	0	15	0						70			SW88 17 90 127-128
	0	15	0						4			SW88 17 90 127-128
	0	15	0						4			SW88 17 90 127-128
20	471	3	1414						4			SW88 17 90 127-128
1030	558184	20	11163676	30	22				70	Tilton R	1	SW88 17 90 127-128
900	325156	20	6503112	19	13				70	Tilton R	1	SW88 17 90 127-128
800	1005312	15	15079680	18	28				70	Tilton R	1	SW88 17 90 127-128
1140	823728	20	16474550	28	33				70	Tilton R		SW88 17 90 127-128
1540	108856	20	2177129	22	15	33			7		5	SW88 17 89 57-59
50	1964	5	9818						7			SW88 17 89 57-59
90	3181	4	12723	41					7		2	SW88 17 89 57-59

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 04E	26N1	*	Connelly C	1900	110	Tpg		sw	45	48	ss				235			
13 04E	26N2	*	Connelly C	2000	75	Tpg		sw	45	51	ss				235			
13 04E	26N20	*	Connelly C	1480	105	Tpg		sw		78	xs				235			
13 04E	26N21	*	Connelly C	1800	110	Tpg		sw			xs				234			
13 04E	26N22	*	Connelly C	1460	150	Tpg		sw	12		xs				235			
13 04E	26N23	*	Connelly C	1560	155	Tpg		sw			xs				235			
13 04E	26N24	*	Connelly C	1600	110	Tpg		sw	17		xs				235			
13 04E	26N25	*	Connelly C	1720	105	Tpg		sw			ss				235			
13 04E	26N26	*	Connelly C	1600	105	Tpg		sw			xs				235			
13 04E	26N27	*	Connelly C	1680	130	Tpg		sw							234	235		
13 04E	26N3	*	Connelly C	1800	90	Tpg		sw		51	ss				235			
13 04E	26N4	*	Connelly C	2080	195	Tpg		sw		51	ds				235			
13 04E	26N5	*	Connelly C	1500	155	Tpg		sw		34	xs			pl	235			
13 04E	26N6	*	Connelly C	1800	23	Tpg		sw		34	ss				235			
13 04E	35D1	*	Morton	1700	150	Tpg		sw			xs			pl	235			
13 04E	35D20	*	Tilton R	1390	115	Tpg		sw			xs			pl	234	235		
13 04E	35G1	*	Morton	1080	125	Qdht					xs			pl	51			
13 04E	36B1	*	Coal C	1280	92	Tpg					xs	fa			147			
13 04E	36G1	*	Coal C	1540	50	Tpg					ds	fa			147			
13 04E	36J1	*	Coal C	1480	45	Tpg					ds	fa			147			
13 04E	36L1	*	Tilton R	1540	295	Tpg		s			xs				147			
13 05E	01A20	*	Gallup C	2540	120	Tva					ds				161			
13 05E	01D1	*	Gallup C	3000	95	Tva			40		ds				215			
13 05E	01F20	*	Gallup C	2720	355	Tva					ss				161			
13 05E	01K20		Gallup C	3320	335	Tva					ss				33			
13 05E	01K21		Gallup C	3040	270	Tva					xs				216			
13 05E	01Q20		Gallup C	3640	60	Tva					xs				33			
13 05E	02D1		Gallup C	3800	70	Tva									215			
13 05E	02E1	*	Gallup C	3760	130	Tva					ds				220			
13 05E	02E2	*	Gallup C	3720	95	Tva					ds				220			
13 05E	02E3	*	Gallup C	3800	135	Tva					ds				220			
13 05E	02F1		Gallup C	3460	175	Tva			12		xs				220			
13 05E	02F2		Gallup C	3440	215	Tva					xs				220			
13 05E	02H1	*	Gallup C	3160	120	Tva		ese			ds				215		163	
13 05E	02H2		Gallup C	3200	185	Tva					xs				220			
13 05E	02H21		Gallup C	2600	185	Tva									220			
13 05E	02H22		Gallup C	2200	185	Tva									220			
13 05E	02H23		Gallup C	3200	185	Tva									215			
13 05E	02H24		Gallup C	2600	185	Tva									220			
13 05E	02H3	*	Gallup C	3160	120	Tva					ds				215			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
Vbqt	dt	sc	fl				ch l	3	2	100		100	550	
IIIAg	rxsr	sc	fl				i l? af? on	4	3	1970	1270			
VBqt	dt	sc	fl			ex	dp	1	1	40				
VIs5	sr-ef	sc	fl					1	2	100				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	40				
VBq3-VII	da-sc	sc	fl			ex		2	1	40				
VIs5	sr-ef	sc	fl			ex	dp hd	3	1	130				
VBq3	da	sc	fl			ex		3	1	80				
VBq3	da	sc	fl			ex		2	1	20				
VBq3	da	sc	fl			ex	dp on	2	1	50				
VIs5	sr-ef	sc	fl	hm				4	3	200				
IIIBK	ds	sc	fl				ex	2	1	50				
VBq3-VII	da-sc	sc	fl			ex	dp	1	1	50				
IIIBk	ds	sc	fl				hw l sh i SU	3	3	770				
VIs5	sr-ef	sc	fl	hm			dp	4	1	200				
IIIAh	dsr	sc	fl				hw l sh i SU	3	3	770				
IIIBk	ds	sc	fl				hw SU	3	3	150				
VIs5	sr-ef	sc	fl	hm			on hw SU?	3	3	1600				
IIIBk	ds	sc	fl				SU hw	3	3	600				
VIs5	sr-ef	sc	fl	hm			i l SU?	4	2	2000				
VBq3-VII	da-sc	sc	fl				(ex) ch SU?	2	1	25				
IIIBk-VII	ds-cb	sc	fl			ex		1	1	200				
VBqt	dt	sc					ch BIC	3	2	30				
VBqt	dt	sc					ch BIC	3	2	30				
VBq3	da	sc					ch BIC	3	2	30				
VBqt	da	sc					ch BIC	3	3	30				
VBqt	dt	sc	fl				(ex) ch	2	2	60				
VBq3	da	sc	fl			ex	h	2	1	50	220			
IIIBk-VII	ds-sc	sc	fl			ex	h	2	1	60	110			
VBqt-VII	dt-rd	sc	fl			ex	ch	2	1	70				
VBq3	da	sc	fl			ex	dp	2	1	75	175			
VBq3-VII	da-rd	sc	fl			ex		2	1	50				
IIIAg	rxsr	sc	fl		pr		on (ex) SU?	4	2	2020				
IIIAg	rxsr	sc	fl		pr?		SU? (ex) rej on	4	2	845				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	38				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	45				
VBq3	da	sc	fl			ex		1	1	40				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
110	8639	15	129591	34	43	32			70			SW88 17 89 57-59
745	1152692	4	4610769	34	44	29			4	Connelly C	2	SW88 17 89 57-59
40	1257	8	10053	34	42	39	39		5	trb1	5	SW88 17 89 57-59
100	7854	15	117810	34	42				70	trb1	5	SW88 17 89 57-59
30	707	4	2827	34	42	55			4	trb1	5	SW88 17 89 57-59
40	1257	4	5027	34	42				5	trb1	5	SW88 17 89 57-59
40	1257	4	5027	34	42				4	trb1	5	SW88 17 89 57-59
90	9189	15	137838	34	42	39	45		4	trb1	5	SW88 17 89 57-59
80	5027	8	40212	34	42				4	trb1	5	SW88 17 89 57-59
20	314	4	1257	34	42				4	trb1	5	SW88 17 89 57-59
395	15512	4	62047	30	44				4	trb1	5	SW88 17 89 57-59
200	31416	40	1256640	34	42				70	trb1	5	SW88 17 89 57-59
100	3927	10	39270	36	20		44		4	trb1	5	SW-C-78 32
50	1964	3	5891	34	42		45		4	trb1	5	SW88 17 89 57-59
450	272141	10	2721411	28	39				4	Tilton R	2	SW88 17 89 55-56
200	31416	30	942480	28	39				4	Tilton R	2	SW88 17 89 55-56
1810	1094612	15	16419180	28	39				70	Tilton R	2	SW88 17 89 55-56
215	25329	4	101317	31	34				70	Coal C	3	SW88 17 90 126
2810	3531158	15	52967376	6	10				70	Coal C	3	SW88 17 90 126
560	263894	4	1055578	15	16				70	Coal C	3	SW88 17 90 126
3290	5167932	40	206717280						70	Tilton R	1	SW88 17 90 126
40	785	4	3142						55			SW88 18 96 229-230
187	29374	10	293740	21					40	Gallup C	3	SW88 18 96 229-230
30	707	5	3534						55			SW88 18 96 229-230
40	942	5	4712						55			SW88 18 96 229-230
30	707	4	2827						55			SW88 18 96 229-230
30	707	4	2827						25			SW88 18 96 229-230
60	2827	4	11310						18		5	SW88 18 95 192
50	1964	4	7854	20					18	rd,trb1		SW88 18 95 192
145	6833	4	27332	31					18	rd		SW88 18 95 192
35	1924	5	9621	44					18		5	SW88 18 95 192
35	2062	4	8247	39					18	trb1	5	SW88 18 95 192
50	1964	4	7854						18			SW88 18 95 192
1285	2038663	80	163093022	29	21		28		18	Gallup C	3	SW88 18 95 192
695	461246	50	23062289	58	28				18	trb2	4	SW88 18 95 192
40	1257	5	6283						18			SW88 18 95 192
50	1492	4	5969						18			SW88 18 95 192
40	1257	5	6283						18			SW88 18 95 192
20	707	5	3534						18			SW88 18 95 192
20	628	6	3770			32	52		40			SW88 18 95 192

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	02H4	*	Gallup C	3000	120	Tva					ds				215			
13 05E	02H5	*	Gallup C	3000	120	Tva					ds				215			
13 05E	02H6	*	Gallup C	3000	120	Tva					ds				215			
13 05E	02J1		Gallup C	2480	122	Tva					xs				24			
13 05E	03A1		Tilton R	4600	310	Tva			31		xs				220			
13 05E	03C1	*	Tilton R	3400	345	Tva		se	35		ss				220			
13 05E	03C2	*	Tilton R	3400	305	Tva		se	35		ss			pl?	215	220		
13 05E	03D1	*	Tilton R	3220	355	Tva		se	35		xs				220	179		
13 05E	03E21	*	Tilton R	3800	15	Tva		se	35		ss				220			
13 05E	03E22	*	Tilton R	3880	20	Tva					xs				220			
13 05E	03F1	*	Tilton R	3850	245	Tva					xs				176			
13 05E	03F20	*	Tilton R	4200	245	Tva					xs			pl	220	215		
13 05E	03J1	*	Gallup C	3540	100	Tva		se	45		xs				215			
13 05E	03J2	*	Gallup C	3880	90	Tva		se	45		ds				215	220		
13 05E	03J20	*	Gallup C	4000	110	Tva		se	45		ds				215			
13 05E	03J21	*	Gallup C	3560	100	Tva		se	45		ds				220			
13 05E	03J22	*	Gallup C	3600	180	Tva		se	45		ds				215			
13 05E	03P1	*	Tilton R	4000	340	Tva		se	60		ss				220			
13 05E	03P20	*	Tilton R	4000	345	Tva		se	55						220			
13 05E	03Q1	*	Gallup C	3720	110	Tva		se	40		ds				215	220		
13 05E	03Q2	*	Gallup C	4200	180	Tva		se	35		ds				220			
13 05E	04A1	*	Tilton R	3170	345	Tva		se	35		xs				220			
13 05E	04A20	*	Tilton R	3300	193	Tva		se	35		xs				220			
13 05E	04B20	*	Tilton R	2920	315	Tva					ss				185			
13 05E	04C20		Tilton R	1880	260	Qdht					ss				146			
13 05E	04C21		Tilton R	1840	300	Qdht					ss				50			
13 05E	04F20	*	Tilton R	2000	270	Tva		e	46		ss				146			
13 05E	04H1	*	Tilton R	3420	317	Tva					xs				220	219		
13 05E	04J1	*	Tilton R	2960	230	Tpg		ese	28		xs				220	215		
13 05E	04J2	*	Tilton R	3000	225	Tpg		e	46		xs				220	215		
13 05E	04J3	*	Tilton R	3100	225	Tpg		e	46		xs				220			
13 05E	04J4	*	Tilton R	3160	225	Tpg		e	46		xs				220			
13 05E	04L1	*	Tilton R	2200	250	Tia		e	46		xs				161			
13 05E	04L2	*	Tilton R	2200	70	Tia		e	46		xs				161			
13 05E	04L20	*	Tilton R	2400	45	Tva					xs				161			
13 05E	04N1		Tilton R	2160	225	Tia		e	46		xs				163			
13 05E	04N20	*	Tilton R	2480	255	Tva		se	20		xs				163			
13 05E	04Q1	*	Tilton R	3000	285	Tva					ss				220			
13 05E	04Q2	*	Tilton R	3200	310	Tva		se			ss				220			
13 05E	04Q20	*	Tilton R	3000	350	Tva		se			ss				220			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl			ex		1	1	35				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	45				
IIIBk	ds	sc				ex	SU sh	2	1	20				
IIIAg	rxsr	sc	fl				h	4	3					
VBqt-VII	dt-rd	sc	fl			ex	h ch	2	1	50		165	1750	
VBq3-VII	da-sc	sc	fl				(ex) dp	1	1	50				
VBq3-VII	da-sc	sc	fl			ex	dp	2	1	100	195			
VBq3	da	sc	fl			ex	ch	2	1	30				
Ia-IId1	rf-rt	sc					e (ex)	1	1	10				
IIIBk-VII	ds-sc	sc	fl			ex		2	1	35	145			
VIs5	sr-ef	sc	fl				dp l	1	2					
IIIBk-VII	ds-sc	sc	fl			ex	dp	2	1	15				
IIIAg	rxsr	sc	fl				h dp	3	3	10				
VBqt	dt	sc	fl			ex	ch	1	1	40				
VBq3	da	sc	fl				ch	3	4	45				
VBq3-VII	da-sc	sc	fl			ex	tc	1	1	20				
Ia-IId1	rf-rt	sc						4	1	445				
VBq3	da	sc	fl				ch af	3	2	40				
VBq3-VII	da-ld	sc	fl			ex	ch	1	1	75		80	545	
VIs5	sr-ef	sc	fl					4	4					
VBqt-VII	dt-sc	sc	fl			ex	dp ch s	2	1	170		390	3520	
IIIBk-VII	ds-sc	sc	fl			ex	dp	2	1	120				
VIs5	sr-ef	sc	fl					4	4	100				
VBqt	dt	sc	fl				(ex)	3	2	30				
IIBk-VII	ds-sc	sc	fl				(ex)	2	2	30				
VBqt	dt	sc	fl			ex	ch	1	1	60				
VBqt-VII	dt-sc	sc	fl				ch sh	3	2	50			120	2900
IIIBk	ds	sc	fl			ex	dp	2	1	100	156			
IIIBk	ds	sc	fl			ex	dp	2	1	60	60			
IIIBk	ds	sc	fl			ex	dp	2	1	60	60			
IIIBk-VII	ds-sc	sc	fl			ex	dp r	2	1	50	50			
VBqt	dt	sc	fl			ex	h dp s	2	1	60		195	1370	
VBqt-VII	dt-ld	sc	fl			ex	ch s	2	1	60				
VIs5	sr-ef	sc	fl				dp	3	3					
VBqt	dt	sc	fl			ex	ch	2	1	30				
VIs5	sr-ef	sc	fl				h dp	4	1					
VBqt	dt	sc	fl				ch sh (ex)	2	1	80		310	1175	
IIIAg	rxsr	sc	fl		pr?		dp? (ex)	4	1	273				
VBq3	da	sc	fl			ex		2	1	40				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
20	550	5	2749						18			SW88 18 95 192
25	785	5	3927						18			SW88 18 95 192
30	1060	5	5301						18			SW88 18 95 192
185	2906	5	14530	57					18	trb2	4	SW88 18 95 192
	0	40	0						8			SW88 18 94 160
20	785	10	7854	30		37			20	rd	5	SW88 18 94 160
30	1178	4	4712	29		41			20		5	SW88 18 94 160
60	4712	4	18850	38		38			10	rd	5	SW88 18 94 160
20	471	4	1885						8			SW88 18 94 160
	0	4	0						6			SW88 18 94 160
35	962	4	3848	31					6	rd	5	SW88 18 94 160
	0	15	0						8			SW88 18 94 160
72	848	4	3393	33					14		5	SW88 18 94 160
510	4006	30	120166	75		37			14		5	SW88 18 94 160
10	314	4	1257			37			14			SW88 18 94 160
50	1767	4	7069						10			SW88 18 94 160
120	1885	4	7540						10			SW88 18 94 160
620	216692	4	866767	37		60			25		4	SW88 18 94 160
15	471	4	1885			65			20			SW88 18 94 160
20	1178	4	4712	38		43			8			SW88 18 94 160
	0	80	0						10			SW88 18 94 160
135	18025	4	72100						6		5	SW88 18 93 121-123
130	12252	9	110270				36		6			SW88 18 93 121-123
	0	80	0						60			SW88 18 93 121-123
30	707	4	2827						6			SW88 18 93 121-123
30	707	4	2827						6			SW88 18 93 121-123
100	4712	5	23562						60			SW88 18 93 121-123
40	1571	4	6283	37					60	trb	4	SW88 18 93 121-123
25	1964	10	19635	37					6	trb	4	SW88 18 93 121-123
35	1649	5	8247	37					7	trb	4	SW88 18 93 121-123
10	471	5	2356	37					7	trb	4	SW88 18 93 121-123
10	393	5	1964	37					7	trb	4	SW88 18 93 121-123
80	3770	4	15080	21		45			9	trb	4	SW88 18 93 121-123
80	3770	4	15080						9			SW88 18 93 121-123
	0	40	0						9			SW88 18 93 121-123
60	1414	4	5655	13					9		5	SW88 18 93 121-123
	0	60	0						9			SW88 18 93 121-123
40	2513	6	15080	45					10	trb	4	SW88 18 93 121-123
235	50387	30	1511620	38					15	trb	4	SW88 18 93 121-123
40	1257	4	5027						10			SW88 18 93 121-123

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	04Q21	*	Tilton R	3400	320	Tva		se			ss				220			
13 05E	04Q3	*	Tilton R	3100	332	Tva		se			ss				220			
13 05E	05D1	*	Tilton R	2500	100	Qdht		wsw				fa			231	164		
13 05E	05D2	*	Tilton R	2300	100	Qdht		wsw				fa			231			
13 05E	05D20	*	Tilton R	2520	95	Qls	Qdht	wsw				fa			231			
13 05E	05D21	*	Tilton R	2520	110	Qls	Qdht	wsw				fa			231			
13 05E	05D22	*	Tilton R	2520	125	Qls	Qdht	wsw				fa			231			
13 05E	05D23	*	Tilton R	2520	100	Qls	Qdht	wsw				fa			231			
13 05E	05D24	*	Tilton R	2320	100	Qls	Qdht	wsw				fa			164			
13 05E	06D1		Tilton R	3100	115	Tva		se	26		ds				178			
13 05E	06G1		Tilton R	2500	80	Tpg		se	50	25	xs				250			
13 05E	06H20		Tilton R	2920	260	Tpg		se	50						250	217		
13 05E	06J1		Tilton R	2500	105	Tidl	Tpg	sw	50			fa			165	250		
13 05E	06K1		Tilton R	2800	95	Tidl	Tpg	e			ds				165	250		
13 05E	06L1		Tilton R	2900	90	Tidi		e			xs				165	219		
13 05E	06L2		Tilton R	2600	180	Tpg		e			xs	fa			165			
13 05E	06M1		Tilton R	3220	0	Qls		e			xs			pl	217			
13 05E	06Q20		Tilton R															
13 05E	07A1		Tilton R	2600	65	Tidl		e			xs				164			
13 05E	07D20	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D21	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D22	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D23	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D24	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D25	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D26	*	Tilton R	2800	265	Tidl		e			ss				165			
13 05E	07D27	*	Tilton R	2800	265	Tidl		e	25		ss				165			
13 05E	07F1		Tilton R	2160	120	Tidl		e	25		ds				165			
13 05E	07F20	*	Tilton R	2200	210	Tidl	Qls	ese			xs			pl	165			
13 05E	07F21	*	Tilton R	2200	210	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F22	*	Tilton R	2200	210	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F23	*	Tilton R	2400	180	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F24	*	Tilton R	2400	210	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F25	*	Tilton R	2180	180	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F26	*	Tilton R	2200	270	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F27	*	Tilton R	2300	100	Tidl	Qls	ese	25		xs			pl	165			
13 05E	07F28	*	Tilton R			Tidl	Qls	ese	25		xs			pl	165			
13 05E	07H20	*	Tilton R	1800	100	Tidl		ese			ds				147			
13 05E	07J1	*	Tilton R	2000	205	Tidl					xs			pl	161			
13 05E	07J20	*	Tilton R	2160	185	Tidl		se			xs			pl	147	161		

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VIs5	sr-ef	sc	fl				dp	4	4					
IIIAg	rxsr	sc	fl		pr?		dp? (ex)	4	1	470				
VIs5	sr-ef	sc		hm	pr		on (ex)	3	1	1058				
VBq3	da	sc	fl			ex	dp r	1	1	40				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	40				
VBq3	da	sc	fl			ex		1	1	40				
IIIBk-VII	ds-cb	sc	fl			ex		1	1	60				
VIs5	sr-ef	sc	fl				i (ex) BIC rej	4	4	1230	1450			
IIIAg	rxsr	sc	fl					4	4	300				
VBqt-VII	dt-rd	sc					ch	3	2	30				
VIs5	sr-ef	sc		hm				4	3	2385	2150			
VIs5	sr-ef	sc	fl	hm				3	2					
VIs5	sr-ef	sc	fl	hm				4	1	900	950			
VBq3-VII	da-sc	sc				ex		2	1	90				
VIs5	sr-ef	sc		hm	pr		p	4	1	2750				
VBq3	da													
VBq3	da	sc	fl					3	1	770				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
VBq3	da	sc	fl					3	1	40				
IIIBk-VII	ds-sc	sc				ex		2	3	40	150			
IIIAg	rxsr	sc	fl					3	1					
VBq3	da	sc	fl			ex		1	1	20				
VBq3	da	sc	fl			ex		1	1	20				
VBq3	da	sc	fl			ex		1	1	20				
IIIAg	rxsr	sc	fl			ex	dp	3	1					
VBq3	da	sc	fl			ex		1	1	20				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	80				
IIIAg	rxsr	sc	fl				dp	2	3	30		20		
VBqt	dt	sc	fl				sh ch dp	2	1	80		109	955	
VBq3	da	sc						1	1	20				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0	40	0						15			SW88 18 93 121-123
215	79365	30	2380940	39		38	45		15	trb	4	SW88 18 93 121-123
	0	50	0	26	20				12	Tilton R	5	SW88 25 91 38
20	628	4	2513	35					12	Tilton R	5	SW88 25 91 38
20	628	4	2513						12			SW88 25 91 38
20	628	4	2513						12			SW88 25 91 38
20	628	4	2513						12			SW88 25 91 38
20	628	4	2513						12			SW88 25 91 38
20	942	4	3770						12			SW88 25 91 38
1230	1188232	40	47529266	18	22				15	trb	4	SW-C-78 46B-40
365	86001	50	4300065	11					15		4	SW88 18 91 27-28
30	707	4	2827						15	trb		SW88 18 91 27-28
2505	4692313	50	234615670	26	22				7	Tilton R	3	SW88 18 91 27-28
690	0	50	0	22	11				7		4	SW88 18 91 27-28
680	480665	50	24033240	28					5		4	SW88 18 91 27-28
45	3181	4	12723	16					7		5	SW88 18 91 27-28
1140	2462229	50	123111450	17	18				15		4	SW88 18 91 27-28
	0		0						15			SW88 18 91 27-28
530	320522	4	1282087	25	39		38		4		4	SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
40	1257	7	8796			42			5			SW88 18 91 26-27
340	10681	4	42726	39					5		4	SW88 18 91 26-27
10	0	4	0						5			SW88 18 91 26-27
10	157	4	628						5			SW88 18 91 26-27
10	157	4	628						5			SW88 18 91 26-27
200	3142	10	31416						5			SW88 18 91 26-27
100	0	5	0						5			SW88 18 91 26-27
20	314	4	1257						5			SW88 18 91 26-27
30	707	4	2827						5			SW88 18 91 26-27
40	1257	4	5027						5			SW88 18 91 26-27
60	3770	12	45239						5			SW88 18 91 26-27
20	471	5	2356						9			SW88 18 91 26-27
80	5027	4	20106	22	42				5		4	SW-C-78 46 40
15	236	8	1885				50		5			SW88 18 91 26-27

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	07J21	*	Tilton R	2160	185	Tidl		se			xs			pl	147	161		
13 05E	07J22	*	Tilton R	2160	185	Tidl		se			xs			pl	147	161		
13 05E	07J23	*	Tilton R	2160	185	Tidl		se			xs			pl	147	161		
13 05E	07K2	*	Tilton R	2100	190	Tidl								pl	147	161		
13 05E	07K20	*	Tilton R	2080	190	Tidl		ese			xs			pl	147	161		
13 05E	07K21	*	Tilton R	1800	190	Tidl					xs			pl	161	147		
13 05E	07L1	*	Tilton R	2400	185	Qls		e			xs			pl	165	161		
13 05E	08L1		Tilton R	1460	210	Qdlht						fa			146			
13 05E	08R1		Tilton R	2300	340	Tva					xs				165			
13 05E	09C1	*	Tilton R	3200	315	Tva		ese			ss				220	215		
13 05E	09C2	*	Tilton R	3200	315	Tva		ese			ss				220	215		
13 05E	09C20	*	Tilton R	3000	305	Tva		ese			ss				220			
13 05E	09C21	*	Tilton R	3440	305	Tva		ese			ss				215			
13 05E	09C22	*	Tilton R	3000	305	Tva		ese			ss				215			
13 05E	09C23	*	Tilton R	3000	305	Tva		ese			ss				220			
13 05E	09C24	*	Tilton R	3000	214	Tva		ese			ss				215			
13 05E	09C25	*	Tilton R	2960	230	Tva		ese			ss				163			
13 05E	09C26	*	Tilton R	2960	240	Tva		ese			ss				220			
13 05E	09C27	*	Tilton R	2960	255	Tva		ese			ss				215			
13 05E	09C28	*	Tilton R	2960	255	Tva		ese			ss				215			
13 05E	09C29	*	Tilton R	2960	255	Tva		ese			ss				215			
13 05E	09C3	*	Tilton R	3200	305	Tva		ese			ss				215			
13 05E	09C30	*	Tilton R	3360	330	Tva		ese			ss				215			
13 05E	09C31	*	Tilton R	3320	300	Tva		ese			ss				215			
13 05E	09C32	*	Tilton R	3580	255	Tva									215	220		
13 05E	09D1	*	Tilton R	2400	235	Tva					ss				165			
13 05E	09E1	*	Tilton R	3160	325	Tva					xs				220			
13 05E	09E2	*	Tilton R	2840	345	Tva					xs				220			
13 05E	09E20	*	Tilton R	2680	200	Tva					xs				163			
13 05E	09E21	*	Tilton R	2900	210	Tva					xs				163			
13 05E	09F20	*	Tilton R	3320	300	Tva					ss				220			
13 05E	09H1	*	19 C	3800	240	Tva					ss				220			
13 05E	09J1	*	19 C	3480	285	Tva		se			ss				220			
13 05E	09L1	*	Tilton R	2800	270	Tva		se	30		ss				220			
13 05E	09L20	*	Tilton R	2960	270	Tva		se	30		ss				220			
13 05E	09L22	*	Tilton R	2800	315	Tva		se	30		ss				220			
13 05E	09L23	*	Tilton R	3080	260	Tva					ss				220			
13 05E	09L24	*	19 C	3080	165	Tva					ds				215			
13 05E	09M1	*	Tilton R	2900	250	Tva		se	30		ss				220			
13 05E	09M2	*	Tilton R	2800	315	Tva		se	30		ss				165			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc						1	1	20				
VBq3	da	sc						1	1	20				
VBq3	da	sc						1	1	20				
VIs5	sr-ef	sc					(ex)? rej?	4	1	1220				
VIs5	sr-ef	sc						4	1					
VBq3	da	sc						3	1	200				
VIs5	sr-ef	sc		hm				4	1	1175				
IIIBk	ds	sc					(ex) SU	2	2	200				
Ia-IId1	rf-rt						c	3	1	40				
IIIBk-VII	ds-sc	sc	fl				ch sh (ex)	2	1	50	625			
VBq3-VII	da-sc	sc	fl				ch sh (ex)	2	1	30	705			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-cb	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-cb	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-cb	sc	fl			ex	ch	2	1	30				
VBq3	da							2	1	150				
VBq3	da							2	1	150				
VBq3	da							2	1	150				
VBq3	da							2	1	150				
VBq3	da							2	1	150				
VIs5	sr-ef	sc	fl	hm			dp 1 on	3	2					
VBq3	da	sc	fl			ex	dp	2	1	20				
VBq3	da	sc	fl			ex	dp	2	1	20				
VIs5	sr-ef	sc	fl				on	4	2					
VBqt	dt	sc	fl			ex	ch	2	1	30				
VBq3	da	sc	fl			ex		2	1	50				
VBq3	da	sc	fl			ex		1	1	30				
VBq3	da	sc	fl					2	1	30				
VIs5	sr-ef	sc	fl				dp	4	3					
VBq3	da	sc	fl					2	1	30				
VBq3	da	sc	fl				bg	3	4	425	250			
VBq3	da	sc	fl				(ex)	3	2	250	465			
VBq3	da	sc	fl			ex	dp c	2	1	77				
VBq3	da	sc	fl					2	1	30				
VBq3	da	sc	fl			ex	dp	2	1	30				
VBq3	da	sc	fl					2	1	50				
VBqt-VII	dt-sc	sc	fl			ex	ch dp	1	1	50				
VBq3	da	sc	fl			ex	dp	2	1	70				
VBq3	da	sc	fl				ch	3	1	30				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
15	236	8	1885				50		5			SW88 18 91 26-27
15	236	8	1885				50		5			SW88 18 91 26-27
15	236	8	1885				50		5			SW88 18 91 26-27
1830	1753484	4	7013936	29					5		4	SW-C-78 46 40
	0		0						5			SW88 18 91 26-27
200	31416	4	125664						5			SW88 18 91 26-27
750	692134	4	2768535	45			35		5		3	SW88 18 91 26-27
325	51051	4	204204	22					4		3	SW88 18 92 93-94
810	25447	4	101788	28	44				30		4	SW88 18 92 93-94
20	785	4	3142	39		40			10		4	SW88 18 93 121-123
20	471	10	4712	30		40			10		4	SW88 18 93 121-123
30	707	4	2827			40			10			SW88 18 93 121-123
30	707	4	2827			40			10			SW88 18 93 121-123
30	707	4	2827			40			10			SW88 18 93 121-123
30	707	4	2827			40			10			SW88 18 93 121-123
30	707	4	2827			40			10			SW88 18 93 121-123
60	7069	6	42412				45		10			SW88 18 93 121-123
60	7069	6	42412				45		10			SW88 18 93 121-123
60	7069	6	42412				45		10			SW88 18 93 121-123
60	7069	6	42412				45		10			SW88 18 93 121-123
60	7069	6	42412				45		10			SW88 18 93 121-123
	0	40	0						10			SW88 18 93 121-123
20	314	4	1257						10			SW88 18 93 121-123
20	314	4	1257						10			SW88 18 93 121-123
	0	50	0						10			SW88 18 93 121-123
145	3416	4	13666	30					10		3	SW88 18 93 121-123
50	1964	4	7854						10			SW88 18 93 121-123
30	707	4	2827						10			SW88 18 93 121-123
30	707	5	3534						4			SW88 18 93 121-123
	0	30	0						4			SW88 18 93 121-123
30	707	4	2827						4			SW88 18 93 121-123
195	65090	4	260360	39	21				30		3	SW88 18 93 121-123
175	34361	60	2061675	29					10		3	SW88 18 93 121-123
48	2903	4	11611	39					4		4	SW88 18 93 121-123
30	707	4	2827						4			SW88 18 93 121-123
30	707	4	2827			43	38		4			SW88 18 93 121-123
30	1178	4	4712						4			SW88 18 93 121-123
55	2160	4	8639					40	4			SW88 18 93 121-123
50	2749	4	10996	39		45			4		3	SW88 18 93 121-123
30	707	4	2827						4			SW88 18 93 121-123

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	09N20	*	19 C	2800	200	Tva		se	30		xs				106			
13 05E	09N21	*	19 C	2400	200	Tva		se	30		xs				106			
13 05E	09R1	*	19 C	3000	150	Tva		se	30		xs			pl	220			
13 05E	10L1	*	Gallup C	3800	40	Tva	Qls	se	58		xs			pl?	177	185		
13 05E	10L20	*	Gallup C	3880	45	Tva	Qls				xs				177			
13 05E	10N1	*	19 C	3320	100	Tva			16		ss				220			
13 05E	10N20	*	19 C	3400	300	Tva					ss				220			
13 05E	10R20	*	EF Tilton	3480	10	Tva					xs				220	185		
13 05E	10R21		EF Tilton	3100	150	Tva					xs				222	165		
13 05E	11A1	*	Gallup C	3800	319	Tva		se			ss				215			
13 05E	11F1	*	Gallup C	2900	135	Tva					xs				216			
13 05E	11F20	*	EF Tilton	3160	355	Tva		sse	16	30	xs				216			
13 05E	11J1	*	EF Tilton	3000	205	Tva					xs			pl	216			
13 05E	11J2	*	Gallup C	3000	270	Tva					ss				216			
13 05E	11M1	*	EF Tilton	3000	245	Tva					xs				165			
13 05E	12A20	*	Gallup C	3800	340	Tva		se			ss				176			
13 05E	12A21	*	Gallup C	4000	330	Tva		se			ss				220	185		
13 05E	12B20		Gallup C	4000	305	Tva		se			ss				176			
13 05E	12B21		Gallup C	4000	305	Tva		se			ss				185			
13 05E	12C20		Gallup C	3420	300	Tva		se			ss				31	33		
13 05E	12E1	*	EF Tilton	3300	250	Tva					xs				32			
13 05E	12E20	*	EF Tilton	3160	280	Tva					ss				32			
13 05E	12E21	*	EF Tilton	3000	330	Tva					ss				32			
13 05E	12E22	*	EF Tilton	3460	215	Tva					ss				32	216		
13 05E	12F20	*	EF Tilton	4000	350	Tva					ss				216			
13 05E	12F21	*	EF Tilton	4000	330	Tva					ss				33			
13 05E	12G1	*	EF Tilton	4000	135	Tva					ds				216			
13 05E	12G2		EF Tilton	3300	195	Tva					xs				216			
13 05E	12G3		EF Tilton	4000	135	Tva					ds				216			
13 05E	12G4		EF Tilton	3560	190	Tva					ds				216			
13 05E	12G5		EF Tilton	2960	85	Tva					xs				32			
13 05E	12G6		EF Tilton	3120	190	Tva					xs				216			
13 05E	12G7		EF Tilton	3120	100	Tva					ds				216			
13 05E	12G8		EF Tilton	3020	190	Tva					xs				216			
13 05E	12L1		EF Tilton	3800	234	Tva					ss				220			
13 05E	12L2		EF Tilton	3880	240	Tva					ss				220			
13 05E	12L20		EF Tilton	3600	260	Tva					ss				32			
13 05E	12L3		EF Tilton	3920	268	Tva					ss				220			
13 05E	12L4		EF Tilton	3400	270	Tva					ss				220			
13 05E	12L5		EF Tilton	3200	260	Tva					ss				220			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VIs5	sr-ef	sc	fl				dp	4	4	574				
VBq3	da	sc	fl				ch	3	3	230				
IIIBk	ds	sc				ex	SU	2	1	50				
VIs5	sr-ef	sc	fl				sw	4	4	1035				
Ia-IId1	rf-rt	sc					c t	3	1	10				
IIIBk	ds	sc	fl			ex	SU	1	1	60				
VBqt	dt	sc	fl			ex	ch	1	1	80				
VBq3	da	sc	fl					3	1					
IIIBk	ds	sc	fl			ex	SU	2	1	35				
VBq3-VII	da-sc	sc	fl				BIC	3	3	60				
IIIBk	ds	sc	fl				h (ex) BIC	2	1	80	170			
VBq3-VII	da	sc	fl			ex	ch	2	1	50				
VIs5	sr-ef	sc	fl	hm			gft	3	1	940				
VIs5	sr-ef	sc	fl				hw	4	3	604				
IIIBk	ds	sc?					BIC (ex) SU	3	4	40				
Ia-IId1	rf-rt	sc					c BIC t	2	1	20				
Ia-IId1	rf-rt	sc					c BIC t	2	1	20				
VBqt	dt	sc					ch hw	3	2	50				
VBqt	dt	sc					ch hw	3	2	50				
IIIAh	dsr	sc	fl				(ex)	3	3	120				
IIIAg	rxsr	sc	fl		pr			3	2	150				
IIIBk	ds	sc	fl			ex		2	1	25				
IIIBk	ds	sc	fl			ex		2	1	40				
VIs5	sr-ef	sc	fl	hm		ex		3	2					
Ia-IId1	rf-rt	sc					c BIC t	2	1	20				
Ia-IId1	rf-rt	sc					c BIC t	2	1	20				
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	50				
VBq3-VII	da-sc	sc	fl				(ex) ch	3	2	40		158		
VBq3	da	sc	fl				(ex)	2	2	50		197		
IIIBk-VII	ds-cb	sc					(ex)	3	3	60		59		
IIIBk	ds	sc	fl				(ex) SU	2	3	30		79		
IIIBk-VII	ds-sc	sc				ex	dp	2	2	10		98		
VBqt	dt	sc	fl				SU ch (ex) dp	2	1	30				
VBqt	dt	sc	fl				ch dp	2	2	50				
VBq3	da	sc					ch BIC	3	2	39				
VBq3	da	sc					ch BIC	3	2	59				
VBq3	da	sc					ch BIC	3	2	40				
VBq3	da	sc					ch BIC	3	2	79				
VBq3	da	sc					ch BIC	3	2	99				
VBq3	da	sc					ch BIC	3	2	99				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
383	172664	15	2589959						4			SW88 18 93 121-123
153	27638	4	110553						4			SW88 18 93 121-123
678	26625	3	79875	39					30		4	SW88 18 93 121-123
5000	4064445	4	16257780	29					30		4	SW88 18 94 158
	0	4	0						30			SW88 18 94 158
105	4948	4	19792	38					30		5	SW88 18 94 158
80	5027	4	20106						30			SW88 18 94 158
	0	8	0						30			SW88 18 94 158
70	1924	4	7697	34					70		5	SW88 18 94 158
35	1649	4	6597	50					90		x	SW88 18 95 190
55	3456	4	13823	34					90		5	SW88 18 95 190
30	1178	6	7069			33			15			SW88 18 95 190
490	361755	100	36175524	18	18				90		4	SW88 18 95 190
754	357684	100	35768373	35	30				90		5	SW-C-78 46B 38
60	1885	4	7540	33					90		4	SW88 18 95 190
100	1571	4	6283						90			SW88 18 96 227-228
100	1571	4	6283						90			SW88 18 96 227-228
50	1964	4	7854						25			SW88 18 96 227-228
50	1964	4	7854						90			SW88 18 96 227-228
150	14137	15	212058						25			SW88 18 96 227-228
175	20617	35	721586	26			33		8		5	SW88 18 96 227-228
20	393	2	785			42	52		6			SW88 18 96 227-228
30	942	3	2827						6			SW88 18 96 227-228
	0	80	0						20			SW88 18 96 227-228
100	1571	4	6283						90			SW88 18 96 227-228
100	1571	4	6283						90			SW88 18 96 227-228
30	1178	4	4712	58					20			SW88 18 96 227-228
70	2199	4	8796	33					20		5	SW88 18 96 227-228
60	2356	4	9425	39					50		5	SW88 18 96 227-228
80	3770	4	15080	33					20		5	SW88 18 96 227-228
110	2592	4	10367	39					20		4	SW88 18 96 227-228
80	628	4	2513	22					20		4	SW88 18 96 227-228
50	1178	4	4712						20			SW88 18 96 227-228
50	1964	5	9818						5			SW88 18 96 227-228
39	1195	4	4778	45					70		5	SW88 18 96 227-228
59	2734	4	10936	40					70		5	SW88 18 96 227-228
	0	4	0						70			SW88 18 96 227-228
79	4902	4	19607	50					70		5	SW88 18 96 227-228
140	10886	4	43543	39					70		5	SW88 18 96 227-228
120	9331	4	37322	39					70		5	SW88 18 96 227-228

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	12M1	*	EF Tilton	3080	220	Tva					ds				216	32		
13 05E	13A1	*	EF Tilton	2800	100	Tva					ds				12			
13 05E	13A2	*	EF Tilton	3120	120	Tva					ds				12			
13 05E	13A20	*	EF Tilton	3000	30	Tva					xs				216			
13 05E	13A21	*	EF Tilton	3140	295	Tva					ss				161			
13 05E	13A30	*	EF Tilton	2720	230	Tva					ss				161			
13 05E	13A31	*	EF Tilton	2840	5	Tva					xs				160			
13 05E	13A32	*	EF Tilton	2720	90	Tva					ds				160			
13 05E	13A33	*	EF Tilton	2600	95	Tva					ds				160			
13 05E	13A34	*	EF Tilton	2600	95	Tva					ds				160			
13 05E	13A35	*	EF Tilton	2600	90	Tva					ds				160			
13 05E	13A36	*	EF Tilton	2720	200	Tva					xs				160			
13 05E	13B20	*	EF Tilton	3240	160	Tva					xs				32	12	12	
13 05E	13F1	*	EF Tilton	2800	190	Tva					xs			pl	163	12	160	
13 05E	13G1		EF Tilton	3000	260	Tva					ss				12	32		
13 05E	13G20	*	EF Tilton	3040	120	Tva					xs				12	12		
13 05E	13K1	*	EF Tilton	2600	190	Tva					xs				12	105		
13 05E	13K20	*	EF Tilton	2120	355	Qdht					xs				105			
13 05E	13K21	*	EF Tilton	2120	30	Qdht					xs				105			
13 05E	13K22	*	EF Tilton	2640	200	Qdht					xs				12			
13 05E	13K23	*	EF Tilton	2640	200	Tva					xs				105			
13 05E	13K24	*	EF Tilton	2200	50	Qdht					xs				105			
13 05E	13K25	*	EF Tilton	2080	160	Tva					xs				105			
13 05E	13L1	*	EF Tilton	3600	100	Tva					ss				12	161		
13 05E	13L20	*	EF Tilton	2400	300	Tva					ss				161	12		
13 05E	13N1	*	EF Tilton	2100	180	Tva					xs				163	161		
13 05E	13R20	*	EF Tilton	2940	30	Tva	Toh				xs				163	161		
13 05E	14F21	*	EF Tilton	2180	250	Tva					ss				160			
13 05E	14F22	*	EF Tilton	2280	115	Tva					xs				160			
13 05E	14M1	*	EF Tilton	2300	180	Tva					ds				105	106	250	
13 05E	14M2	*	EF Tilton	2240	120	Qdht					xs				160			
13 05E	14M2	*	EF Tilton	2240	120	Qdht					xs				160			
13 05E	14M2	*	EF Tilton	2160	95	Qdht					xs				160			
13 05E	14P1	*	EF Tilton	2440	190	Tva					xs				105	159	163	250
13 05E	14Q2	*	EF Tilton	2100	195	Tva					xs				163	250		
13 05E	14Q20	*	EF Tilton	2280	250	Tva					xs				159	163		
13 05E	14R1	*	EF Tilton	2040	200	Tva					xs				162	163		
13 05E	14R2	*	EF Tilton	2200	175	Tva					xs				161			
13 05E	15C1		EF Tilton	3400	270	Tva					ss				185			
13 05E	15C20		19 C	4000	300	Tva					xs				185			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
V1s5	sr-ef	sc	fl	hm	pr		(ex)	3	1	1182				
IIIAg	rxsr	sc	fl	hm			on SU dp hd	3	1	1200				
VBqt-VII	dt-sc	sc	fl			ex	ch	2	1	75				
VBq3-VII	da-sc	sc	fl			ex	ch	1	1	100				
VBqt	dt	sc	fl			ex	SU?	2	1	80				
VBq3	da	sc	fl			ex	SU	1	1	75				
IIIBk	ds	sc	fl			ex	SU	1	1	60				
IIIBk	ds	sc	fl			ex	SU	2	1	60				
IIIBk	ds	sc	fl			ex	SU	2	1	60				
IIIBk	ds	sc	fl			ex	SU	2	1	60				
IIIBk	ds	sc	fl			ex	SU	2	1	60				
VBq3	da	sc	fl			ex	SU	2	1	40				
VBq3	da	sc	fl				(ex) SU	2	1	50				
VIs5	sr-ef	sc		hm	pr		SU (ex) l dp on	2	2	895	1300			
VIs5	sr-ef	sc	fl	hm		ex	SU	3	2	400				
VIs5	sr-ef	sc	fl	hm			SU?	4	3					
VIs5	sr-ef	sc	fl	hm			on l gft	4	1	800				
IIIBk	ds	sc	fl			ex	SU	1	1	40				
IIIBk	ds	sc	fl			ex	SU	1	1	40				
IIIBk	ds	sc	fl				dp	3	3	50				
VIs5	sr-ef	sc	fl	hm			SU?	4	4					
IIIBk	ds	sc	fl			ex	SU	1	1	50				
IIIBk	ds	sc	fl			ex	SU	4	1	50				
IIIAg	rxsr	sc						4	3	800				
IIIAg	rxsr	sc	fl				SU	4	3	210				
VBq3	da	sc				ex	SU	1	1	100				
IIIAg	rxsr	sc	fl				SU	4	2					
VBq3	da	sc	fl			ex	SU?	1	1	70				
VBq3	da	sc	fl				(ex)	3	2	50				
VIs5	sr-ef	sc	fl	hm			sw	4	3	1370	1190			
VBq3	da	sc	fl			ex	dp ch	1	1	50				
VBq3	da	sc	fl			ex	ch dp	3	1	50				
IIIAh	dsr	sc	fl				bg	3	2					
VIs5	sr-ef	sc	fl				SU on	4	1	1390				
IIIAh	dsr	sc	fl				SU	3	3	405				
VBq3	da	sc	fl				ch	1	1	35				
IIIBk	ds	sc	fl			ex	SU	1	1	20				
IIIBk	ds	sc	fl			ex	SU	1	1	100				
VBq3	da	sc	fl				dp (ex) ch h	3	1	20		100		
Ia-IId1	rf-rt	sc					c t	2	1	10				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
450	417754	70	29242798	19	34		23		7		4	SW88 18 96 227-228
500	471240	50	23562000	35	33	29			7		4	SW88 18 96 225-226
40	2356	4	9425	39			43		7		5	SW88 18 96 225-226
45	3534	10	35343			38			7			SW88 18 96 225-226
60	3770	4	15080						7			SW88 18 96 225-226
80	4712	3	14137			34	48		4			SW88 18 96 225-226
70	3299	12	39584			35	50		7			SW88 18 96 225-226
40	1885	4	7540						7			SW88 18 96 225-226
50	2356	4	9425						7			SW88 18 96 225-226
40	1885	4	7540						7			SW88 18 96 225-226
30	1414	4	5655						7			SW88 18 96 225-226
40	1257	4	5027						7			SW88 18 96 225-226
35	1374	4	5498						70			SW88 18 96 225-226
1220	857578	4	3430313	22	22				70		2	SW88 18 96 225-226
950	298452	60	17907120	24	26				7		4	SW88 18 96 225-226
	0	100	0						7			SW88 18 96 225-226
800	502656	80	40212480	19	30	40	24	38	7		4	SW88 18 96 225-226
125	3927	5	19635				43		70			SW88 18 96 225-226
50	1571	4	6283						70			SW88 18 96 225-226
40	1571	5	7854						7			SW88 18 96 225-226
	0	90	0						7			SW88 18 96 225-226
60	2356	4	9425						70			SW88 18 96 225-226
40	1571	5	7854						70			SW88 18 96 225-226
2500	1570800	4	6283200	21					70		4	SW88 18 96 225-226
1680	277089	30	8312674						7			SW88 18 96 225-226
528	41469	4	165876	36	39	70			70		2	SW88 18 96 225-226
	0	100	0						7			SW88 18 96 225-226
50	2749	4	10996						90			SW88 18 95 188-189
45	1767	4	7069						2			SW88 18 95 188-189
1115	1199738	90	107976399	16	22		18		15		4	SW88 18 95 188-189
50	1964	7	13745			29	45		2			SW88 18 95 188-189
50	1964	7	13745			29	45		2			SW88 18 95 188-189
	0	15	0						3			SW88 18 95 188-189
1270	1386467	100	138646662	19	17		23		2		2	SW88 18 95 188-189
810	257650	40	10306019	18	21				2		2	SW88 18 95 188-189
25	687	4	2749			50	34		90			SW88 18 95 188-189
304	4775	8	38202	39	15	45			2		2	SW88 18 95 188-189
405	31809	4	127235	58	39	75	45		2		2	SW88 18 95 188-189
80	1257	4	5027	39	58				30		4	SW88 18 94 156
	0	10	0						30		4	SW88 18 94 156

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	15C21		19 C	4000	300	Tva					xs				185			
13 05E	15F1	*	19 C	3840	159	Tva					ss				185	165		
13 05E	15G1		EF Tilton	3400	185	Tva					ss				185			
13 05E	15G2		EF Tilton	3400	180	Tva					ss				185			
13 05E	15G3		EF Tilton	3300	180	Tva					ss				185			
13 05E	15G4		EF Tilton	3200	145	Tva					ss				165			
13 05E	15K1	*	EF Tilton	2480	115	Tva					ss				106			
13 05E	15M1	*	EF Tilton	2560	90	Tva					xs				160			
13 05E	15P1	*	EF Tilton	2600	140	Tva			21		xs				105			
13 05E	15R1	*	EF Tilton	2280	175	Tva			20		xs				106			
13 05E	16H1		EF Tilton	3700	140	Tva		ne			xs				181			
13 05E	16H2		19 C	3700	300	Tva			18		xs				181	220	186	
13 05E	16H3		19 C	3700	290	Tva					xs				220			
13 05E	16J1		EF Tilton	2700	190	Tva					ss				165			
13 05E	16K1		Tilton R	2860	185	Tva					xs				164			
13 05E	16N1		Tilton R	2700	275	Tva					xs				165			
13 05E	16R1		EF Tilton	2600	220	Tva		ne			ss				165			
13 05E	16R20		EF Tilton	2600	135	Tva		ne			ss				165			
13 05E	16R21		EF Tilton	2600	130	Tva		ne			ss				165			
13 05E	17A1	*	19 C	2160	95	Tva		ssw			ds				165	160		
13 05E	17A2	*	19 C	2000	280	Tva		ss	20		ss				165			
13 05E	17A20	*	19 C	205	10	Tva		se			ss				165			
13 05E	17A21	*	19 C	1920	290	Tva		se			ss				165			
13 05E	17A22	*	19 C	1920	270	Tva		se			ss				165			
13 05E	17A23	*	19 C	1920	270	Tva		se			ss				165			
13 05E	17A24	*	19 C	1840	290	Tva		se			ss				165			
13 05E	17A25	*	19 C	1840	290	Tva		se	37		ss				165			
13 05E	17J1		19 C	2100	193	Tva		ssw			ds				165			
13 05E	17J20		19 C	2480	180	Tva		ssw			ds				160			
13 05E	17K1		19 C	1760	155	Tva	Tpg	ssw			ds				165			
13 05E	17K20		19 C	1760	290	Tva	Tpg	ssw			ss				165			
13 05E	17L1		19 C	1700	115	Tpg		ssw			xs			pl?	147	50		
13 05E	17Q1		19 C	1700	275	Tva		sse			xs			pl?	163			
13 05E	18C1	*	Tilton R	1440	320	Qls	Qdht				ds	fa			146	147		
13 05E	18C20	*	Tilton R	1320	90	Qdht					ss				50			
13 05E	18H1	*	Tilton R	1680	338	Qdht					xs				147			
13 05E	18H20	*	Tilton R	1520	315	Qdht					xs				146			
13 05E	18H21	*	Tilton R	1480	335	Qdht					xs				146			
13 05E	18H22	*	Tilton R	1480	330	Qdht					xs				146			
13 05E	18H23	*	Tilton R	1640	320	Qdht					xs				147	146		

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
Ia-IId1	rf-rt	sc					c t	2	1	10				
VIs5	sr-ef	sc	fl				dp	4	2	800				
VBqt	dt	sc	fl				i hw rev ch	3	2	70		160		
VBqt	dt	sc	fl				i hw rev ch	3	2	50		100		
VBqt	dt	sc	fl				i hw rev ch	3	2	50		120		
VBqt	dt	sc	fl				i hw rev ch	3	2	70		200	2800	
VIs5	sr-ef	sc	fl				h wt	3	2	400				
IIIBk	ds	sc	fl				SU (ex)	2	1	50				
VIs5	sr-ef	sc	fl	hm			h wt	3	1	600				
VBq3	da	sc	fl			ex	dp af	2	1	50	200			
Ia-IId1	rf-rt					ex	t c	2	1	118				
Ia-IId1	rf-rt					ex	t c l sh	3	1	100				
VBq3	da	sc	fl				ch (ex)	2	1	50				
IIIBk	ds	sc				ex	h	2	1	80				
IIIBk-VII	ds-sc	sc				ex	s	3	1	40				
VBq3	da	sc					sh	3	3	40				
VBq3	da	sc				ex		3	1	30				
IIIBk	ds	sc					(ex)	3	4	30				
IIIBk	ds	sc					(ex)	3	4	30				
VBq3	da	sc					SU (ex) sh dp	3	3	80	100			
VBq3	da		fl				sh hw	2	1	80				
VBq3-VII	da-sc	sc	fl			ex	dp hw su	1	1	50				
VBq3-VII	da-sc	sc	fl			ex	dp hw su	2	1	80				
VBq3-VII	da-sc	sc	fl			ex	dp hw su	2	1	60				
VBq3-VII	da-sc	sc	fl			ex	dp hw su	2	1	60				
VBq3-VII	da-sc	sc	fl			ex	sp sr su	2	1	60				
VBq3-VII	da-sc	sc	fl			ex	dp-su	1	1	50				
IIIBk	ds	sc					su (ex) sh	2	1	160				
IIIBk	ds	sc	fl				(ex)	2	2	20				
IIIBk	ds	sc	fl			ex	SU	2	1	50				
VBq3-VII	da-sc	sc	fl			ex	dp-su	1	1	30				
IIIBk	ds	sc					SU (ex) sh l	2	1	40	240			
IIIBk	ds	sc	fl				sh hw ch h	2	1	50	320			
VIs5	sr-ef	sc	fl	hm				4	4					
VBqt	dt	sc	fl			ex	dp	4	1	40				
VBqf-VII	df-rd	sc	fl			ex	SU	2	1	50				
VBqf-VII	df-rd	sc	fl			ex	dp	2	1	40				
VBqf-VII	df-rd	sc	fl			ex	SU	2	1	20				
VBqf-VII	df-rd	sc	fl			ex	SU	2	1	50				
IIIAh	dsr	sc	fl			ex	SU	3	3	515				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0	10	0						30		4	SW88 18 94 156
	0	90	0	45	36				30		4	SW88 18 94 156
70	3848	5	19242	28					30		4	SW88 18 94 156
50	1964	5	9818	39					30		4	SW88 18 94 156
50	1964	5	9818	39					30		4	SW88 18 94 156
70	3848	5	19242	55					30		4	SW88 18 94 156
320	100531	20	2010624	28	25				70		4	SW88 18 94 156
400	15708	4	62832	39	53				70		5	SW88 18 94 156
400	188496	4	753984	18	18				15		3	SW88 18 94 156
40	1571	10	15708	33					15		5	SW88 18 94 156
690	63947	4	255789	43	54				30		x	SW88 18 93 118-119
690	54193	4	216770	48	39				30		x	SW88 18 93 118-119
50	1964	4	7854						30			SW88 18 93 118-119
70	4398	4	17593	50	31				30		4	SW88 18 93 118-119
80	2513	4	10053	34					40		5	SW88 18 93 118-119
30	942	4	3770	26					40		5	SW88 18 93 118-119
40	942	4	3770	31					15		4	SW88 18 93 118-119
40	942	4	3770						40			SW88 18 93 118-119
40	942	4	3770						40			SW88 18 93 118-119
200	12566	4	50266	32	41				15	19 C		SW88 18 92 92-91
80	5027	5	25133			43			15	19 C		SW88 18 92 92-91
55	2160	5	10799			35	40		15	19 C		SW88 18 92 92-91
60	3770	5	18850				43		15	19 C		SW88 18 92 92-91
60	2827	5	14137				43		15	19 C		SW88 18 92 92-91
60	2827	5	14137				43		15	19 C		SW88 18 92 92-91
60	2827	5	14137				43		15	19 C		SW88 18 92 92-91
40	1571	6	9425				41		15	19 C		SW88 18 92 92-91
445	55920	6	335523	39	39				15		4	SW88 18 92 92-91
	0	4	0						15			SW88 18 92 92-91
200	7854	4	31416	50	39				15		4	SW88 18 92 92-91
	0	4	0						15			SW88 18 92 92-91
195	6126	4	24504	26	24				15		4	SW88 18 92 92-91
100	3927	4	15708	22	27				15		x	SW88 18 92 92-91
60	0	40	0	23	15		27		5		4	SW88 18 91 24-25
50	1571	5	7854						12			SW88 18 91 24-25
50	1964	2	3927	22	34		43		12		4	SW88 18 91 24-25
40	1257	4	5027	22	34		34		12		4	SW88 18 91 24-25
20	314	6	1885	22	34		43		12		4	SW88 18 91 24-25
120	4712	10	47124	22	34				12		4	SW88 18 91 24-25
410	165837	30	4975116	22	34				12		4	SW88 18 91 24-25

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	18H25	*	Tilton R	1160	300	Qdht						fa			172			
13 05E	18H26	*	Tilton R	1160	338	Qdht						fa			172			
13 05E	18L1	*	Tilton R	1240	100	Tpg	Qdht				xs				172			
13 05E	18L20	*	Tilton R	1200	100	Qdht									172			
13 05E	18M1	*	WF Tilton	1700	250	Tpg	Qls				xs	fa			147	50		
13 05E	18M2	*	WF Tilton	1160	210	Tpg									147			
13 05E	18N20	*	WF Tilton	1280	210	Qdhd									147			
13 05E	18R22	*	WF Tilton	1900	210	Qdht									147			
13 05E	18R23	*	WF Tilton	1440	270	Qdht					ss				147			
13 05E	19A20		WF Tilton	1600	250	Qdht					ss				234			
13 05E	19D1		WF Tilton	1440	70	Tpg					xs	fa			234			
13 05E	19D2	*	WF Tilton	1240	75	Qdht					xs				147			
13 05E	19D20	*	WF Tilton	1400	80	Qdht					xs				234			
13 05E	19E1	*	WF Tilton	1400	90	Qdht					ds	fa	f		234			
13 05E	19E2	*	WF Tilton	1400	90	Qdht					xs	fa			234			
13 05E	19H1	*	19 C	1500	210	Qdht					xs	fa			203			
13 05E	19H2	*	19 C	1520	150	Tpg					xs	fa			203			
13 05E	19J1	*	19 C	1600	330	Tpg						fa			203			
13 05E	19R1	*	Tilton R	1540	260	Qdht					ss	fa			146			
13 05E	20G1		EF Tilton	2100	205	Tva		s	25		ds	fa			163			
13 05E	20G2	*	EF Tilton	2050	195	Tva		s	25			fa			200	203		
13 05E	20J1	*	EF Tilton	1500	143	Tva		s	25		ds	fa			203			
13 05E	20J20	*	EF Tilton	1700	280	Tva		s	25		xs	fa			203			
13 05E	20J21	*	EF Tilton	1840	304	Tva		s	25		xs	fa			203			
13 05E	20K20	*	EF Tilton	1720	180	Tva		s	25		xs	fa			203			
13 05E	20K21	*	EF Tilton	1680	270	Tva		s	25		xs			pl	203			
13 05E	20P1	*	EF Tilton	1880	110	Tva		s	25			fa			203		51	
13 05E	20P2	*	EF Tilton	1880	105	Tva		s	25		xs	fa			203		51	
13 05E	20P20	*	EF Tilton	1720	110	Tva		s	25			fa			203			
13 05E	20P21	*	EF Tilton	1720	110	Tva		s	25			fa		pl	203			
13 05E	20P3	*	EF Tilton	1880	125	Tva		s	25		ds	fa			203		51	
13 05E	20P4	*	EF Tilton	1440	125	Tva		s	25		ds	fa			203		51	
13 05E	20Q1	*	EF Tilton	1680	185	Tva		s	25		xs	fa			200			
13 05E	20Q2	*	EF Tilton	1800	259	Tva		s	25		ss	fa			200	203		
13 05E	20Q20	*	EF Tilton	1600	280	Tva		s	25			fa			203			
13 05E	20R20	*	EF Tilton	1460	190	Tva		s	25		xs	fa			200			
13 05E	21A20		EF Tilton	2400	240	Tva		se			xs				163			
13 05E	21D20		EF Tilton	2400	220	Tva		se			xs				163			
13 05E	21K1	*	EF Tilton	2160	190	Tva		se				fa			105	147		
13 05E	21L1	*	EF Tilton	2000	200	Tva		se				fa			200	146		

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAh	dsr	sc	fl			ex	su	1	1	60				
IIIAh	dsr	sc	fl			ex	su	1	1	60				
IIIAh	dsr	sc	fl				SU	3	2	410				
IIIBk	ds						dp	3	1	60				
IIIag	rxsr	sc		hm		ex?		3	3					
IIIBh-VII	ds-sc	sc	fl			ex	dp	4	1	15				
IIIAh	dsr	sc						4	3					
IIIAg	rxsr	sc	fl			ex		4	3					
IIIBk	ds	sc	fl				dp	2	1	15				
VBq3	da	sc	fl			ex		2	1	30				
IIIAh	dsr	sc	fl			SU		4	1	515				
IIIBk	ds	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	30				
IIIBk	ds	sc	fl			ex		3	3	720				
VBq3	da	sc				ex		2	1	50				
IIIAh	dsr	sc	fl			SU?		3	3	565				
VBq3	da	sc	fl					2	2	205				
IIIBk	ds	sc					ch	3	3	160				
VIs5	sr-ef	sc	fl				l dp	3	2	670	720			
IIIBk	ds	sc?					(ex) BIC	2	4	115				
IIIAg	rxsr	sc						4	4	1840				
IIIBk	ds	sc	fl			ex	SU	1	1	50				
IIIBk	ds	sc	fl				dp SU	1	1	175				
VBq3	da	sc	fl			ex		1	1	150				
IIIBk	ds	sc	fl			ex		2	1	40				
IIIBk	ds	sc	fl			ex		1	1	100				
VBq3	da	sc	fl			ex	l? (ex)	2	1	150				
VBq3	da	sc	fl			ex	(ex) dp	1	1	285				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	30				
IIIAh	dsr	sc	fl	hm			(ex) dp	2	1	300				
VBq3	da	sc	fl			ex		2	1	40				
IIIAg	rxsr	sc	fl		pr		SU h l	4	2	200				
IIIAg	rxsr	sc	fl				SU hon	4	2	410				
IIIAg	rxsr	sc	fl					2	2					
IIIBk-VII	ds-cb	sc	fl			ex	dp	2	1	35				
VIs5	sr-ef							4	4					
IIIBk	ds					ex		2	3	50				
VIs5	sr-ef	sc	fl	hm			dp su	4	1	629				
VIs5	sr-ef	sc	fl	hm			gft BIC l c SU	4	1	1690	740			

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
45	2121	10	21206				40		70			SW88 18 91 24-25
45	2121	10	21206				40		70			SW88 18 91 24-25
1380	444379	20	8887586	22	22				12		2	SW88 18 91 24-25
20	942	4	3770			35			12			SW88 18 91 24-25
30	0	30	0	22	22				12		2	SW88 18 91 24-25
15	177	3	530						12			SW88 18 91 24-25
30	0	30	0						12			SW88 18 91 24-25
20	0	20	0						6			SW88 18 91 24-25
30	353	6	2121						6			SW88 18 91 24-25
30	707	4	2827	30					6			SW88 17 90 22-23
260	105165	40	4206602	30	30				20		2	SW88 17 90 22-23
30	707	4	2827	34	19				20		2	SW88 17 90 22-23
30	707	4	2827	30					20			SW88 17 90 22-23
330	186611	15	2799166	34	39				25		2	SW88 17 90 22-23
75	2945	6	17672	39	50				25		2	SW88 17 90 22-23
360	159750	15	2396255	34	19				8		3	SW88 17 90 22-23
125	20126	4	80504	32	33	42			8		3	SW88 17 90 22-23
155	19478	4	77912	25	32	18	22		16		3	SW88 17 90 22-23
310	163128	4	652510	28	20				16			SW88 17 90 22-23
100	9032	4	36128	33					40		5	SW88 18 92 90-89
1990	2875821	80	230065651	15	22				40		5	SW-C-78 46B 38
45	1767	5	8836	53		42	42		6		4	SW88 18 92 90-89
	0	6	0			42	48		6			SW88 18 92 90-89
20	2356	4	9425			45			6			SW88 18 92 90-89
40	1257	4	5027				42		6			SW88 18 92 90-89
60	4712	5	23562						6			SW88 18 92 90-89
120	14137	8	113098	45		37	37		6		5	SW88 18 92 90-89
205	45887	13	596531	42	45	37	40		6		5	SW88 18 92 90-89
15	353	4	1414						6			SW88 18 92 90-89
15	353	4	1414						6			SW88 18 92 90-89
200	47124	15	706860	42	31	43	50		6		5	SW88 18 92 90-89
40	1257	4	5027						6			SW88 18 92 90-89
150	23562	15	353430	33	21	22	22		6		4	SW88 18 92 90-89
1350	434719	4	1738876	36	21	34			6		5	SW88 18 92 90-89
	0	15	0						6			SW88 18 92 90-89
23	632	4	2529				34		6			SW88 18 92 90-89
	0	50	0						40			SW88 18 94 154-156
40	1571	4	6283						40			SW88 18 94 154-156
2000	988033	50	49401660	28	24				1		4	SW88 18 94 154-156
1480	1964442	40	78577699	20	18				6		2	SW88 18 93 117-118

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	21L2	*	EF Tilton	1550	210	Qdht		se				fa			198			
13 05E	21N1		EF Tilton	620	200	Qdht		se			xs	fa			200			
13 05E	21N2		EF Tilton	720	195	Qdht		se			xs	fa			146			
13 05E	21N3	*	EF Tilton	1480	210	Qdht		se			xs	fa			200			
13 05E	21N4		EF Tilton	1520	190	Qdht		se			xs	fa			200			
13 05E	21P1		EF Tilton	1900	330	Qdht		se			xs				160	165		
13 05E	21P2		EF Tilton	1800	175	Qdht		se			ds	fa			146			
13 05E	21P3		EF Tilton	1600	170	Qdht		se			ds	fa			146			
13 05E	21P4		EF Tilton	1600	170	Qdht		se			ds	fa			146			
13 05E	21R1		EF Tilton	1520	180	Qdht		se			ds	fa			198			
13 05E	21R2		EF Tilton	1600	175	Qdht		se	27		ds	fa			50			
13 05E	22A1	*	EF Tilton	1960	120	Qdht		e			xs				250	165		
13 05E	22B1	*	EF Tilton	2100	120	Tva		e			ds	fa			105	250		
13 05E	22C1	*	EF Tilton	2040	270	Tva		e			ss	fa			165			
13 05E	22C2	*	EF Tilton	2000	270	Tva		e			ss	fa			165			
13 05E	22F1	*	EF Tilton	2200	240	Tva		ese			xs	fa		pl	105			
13 05E	22F20	*	EF Tilton	1800	200	Tva		ese				fa			105			
13 05E	22F21	*	EF Tilton	1740	200	Tva		ese				fa			105			
13 05E	22G1	*	EF Tilton	1900	170	Tva		ese			xs	fa		pl	250			
13 05E	22G20	*	EF Tilton	1800	120	Tva		e			xs	fa			165			
13 05E	22G21	*	EF Tilton	1720	135	Tva		e			xs	fa			165			
13 05E	22H1	*	EF Tilton	1900	340	Tva		ese			xs	fa			165			
13 05E	22H2	*	EF Tilton	1900	120	Tva		ese			ds	fa			165			
13 05E	22H20	*	EF Tilton	1900	130	Qdht		ese				fa			165			
13 05E	22H22	*	EF Tilton	1800	180	Qdht		ese			xs	fa			250			
13 05E	22H23	*	EF Tilton	1800	180	Tva		ese			xs	fa			250			
13 05E	22H24	*	EF Tilton	1840	120	Qdht		ese			xs	fa			250			
13 05E	22H25	*	EF Tilton	1840	300	Qdht		ese			xs	fa			250			
13 05E	22H26	*	EF Tilton	1840	300	Qdht		ese			xs	fa			250			
13 05E	22H27	*	EF Tilton	1840	300	Qdht		ese				fa			250			
13 05E	22H28	*	EF Tilton	1840	300	Qdht		ese				fa			250			
13 05E	22H3	*	EF Tilton	1680	210	Tva		ese				fa			165			
13 05E	22H4	*	EF Tilton	1720	120	Qdht		ese				fa			165			
13 05E	22K1	*	EF Tilton	2040	320	Qdht		ese			xs	fa			160	165		
13 05E	22K20	*	EF Tilton	1800	305	Qdht		ese			xs	fa			165			
13 05E	22K21	*	EF Tilton	1800	305	Qdht		ese			xs	fa			165			
13 05E	22K22	*	EF Tilton	1800	305	Qdht		ese			xs	fa			165			
13 05E	22K23	*	EF Tilton	1800	305	Qdht		ese			xs	fa			165			
13 05E	22K24	*	EF Tilton	1800	305	Qdht		ese			xs	fa			165			
13 05E	22K25	*	EF Tilton	2040	305	Qdht		ese			xs	fa			165			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIBk-VII	ds-sc	sc	fl				dp (ex)	3	1	50				
IIIBk-VII	ds-cb	sc	fl				ch	3	1	60				
IIIBk-VII	ds-cb	sc	fl				ch	2	2	40				
VBQ3-VII	da-sc	sc	fl				ch	3	3	40				
IIIBk-VII	ds-cb	sc	fl				ch	3	2	50				
IIIBk	ds	sc	fl		pr		SU	3	3	80				
IIIBK	ds	sc	fl					3	4	60				
IIIBK	ds	sc	fl					3	4	42				
IIIBK	ds	sc	fl					3	4	60				
VBq3	da	sc	fl				ch	3	2	60				
IIIBk	ds	sc	fl		pr		I SU?	2	1	60				
IIIAh	dsr	sc	fl				SU	3	1	600				
VIs5	sr-ef	sc	fl	hm	pr			4	4	480				
IIIAg	rxsr	sc	fl				SU c	3	1	320				
IIIAh	dsr	sc	fl				SU c	3	1	320				
VIs5	sr-ef	sc		hm	pr		SU? i	4	2	2300				
IIIBk-VII	ds-cb	sc	fl			ex		2	1	10				
VBq3	da	sc	fl			ex		2	1	20				
IIIAh	dsr	sc	fl		pr		SU?	4	2	1015				
VBq3	da	sc	fl		ch	ex		2	1	30				
VBq3	da	sc	fl		ch	e		2	1	15				
IIIAh	dsr	sc	fl		pr		SU	4	1	640				
IIIAh	dsr	sc	fl		pr		SU? i	3	1	640				
VBq3	da	sc	fl		ch	ex		1	1	100				
VBq3	da	sc	fl		ch	ex		2	1	45				
VBq3	da	sc	fl		ch	ex		1	1	60				
VBq3-VII	da-ld	sc	fl		ch	ex		2	1	15				
VBq3	da	sc	fl		ch	ex		2	1	80				
VBq3	da	sc	fl		ch	ex		2	1	30				
VBq3	da	sc	fl		ch	ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	30				
IIIAh	dsr	sc	fl				on SU bg	4	1	150				
IIIAh	dsr	sc	fl				on SU bg	4	1	300				
VIs5	sr-ef	sc	fl	hm	pr		SU?	4	1	800				
VBq3	da	sc	fl		ch	ex		1	1	150				
VBq3	da	sc	fl		ch	ex		2	1	40				
VBq3	da	sc	fl		ch	ex		2	1	20				
VBq3	da	sc	fl		ch	ex		2	1	40				
VBq3	da	sc	fl		ch	ex		2	1	40				
VBq3	da	sc	fl		ch	ex		2	1	30				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
40	1571	4	6283	39					6		4	SW-C-78 47D-22
30	1414	4	5655	45					14		2	SW88 18 94 154-156
30	942	4	3770	42					14		2	SW88 18 94 154-156
40	1257	4	5027						14			SW88 18 94 154-156
50	1964	4	7854						14			SW88 18 94 154-156
50	3142	4	12566	31					14		4	SW88 18 94 154-156
40	1885	4	7540	27					90		5	SW88 18 94 154-156
40	1319	4	5278	25					90		5	SW88 18 94 154-156
40	1885	4	7540	28					90		5	SW88 18 94 154-156
40	1885	4	7540	28					6		4	SW88 18 94 154-156
40	1885	4	7540	6					14		4	SW88 18 94 154-156
640	301594	30	9047808	30	22				15		2	SW88 18 94 154-156
1230	463700	80	37096013	26	20				7		3	SW88 18 94 154-156
1280	321700	20	6433997	53	53				70		3	SW88 18 94 154-156
1280	321700	20	6433997	37	41				70		4	SW88 18 94 154-156
1390	2510924	60	150655428	58	11		23		5		2	SW88 18 94 154-156
10	79	3	236						5			SW88 18 94 154-156
15	236	3	707						7			SW88 18 94 154-156
1170	932702	50	46635089	18	39				5		2	SW88 18 94 154-156
30	707	4	2827						5			SW88 18 94 154-156
15	177	2	353				43		5			SW88 18 94 154-156
535	268921	80	21513677	47	39				5		2	SW88 18 94 154-156
850	427258	35	14954016	39	30				15		2	SW88 18 94 154-156
80	6283	3	18850			47			7			SW88 18 94 154-156
35	1237	4	4948				46		15			SW88 18 94 154-156
70	3299	4	13195						15			SW88 18 94 154-156
20	236	4	942			45	53		15			SW88 18 94 154-156
60	3770	4	15080			45			15			SW88 18 94 154-156
20	471	4	1885						15			SW88 18 94 154-156
25	589	4	2356						5			SW88 18 94 154-156
30	707	4	2827						15			SW88 18 94 154-156
400	47124	30	1413720	45	39				15		2	SW88 18 94 154-156
340	80111	25	2002770	39	32				15		2	SW88 18 94 154-156
1070	672302	80	53784192	30	32				5		2	SW88 18 94 154-156
35	4123	11	45357						15			SW88 18 94 154-156
40	1257	4	5027						15			SW88 18 94 154-156
15	236	4	942						15			SW88 18 94 154-156
40	1257	4	5027			42	50		15			SW88 18 94 154-156
40	1257	4	5027						15			SW88 18 94 154-156
40	942	4	3770						5			SW88 18 94 154-156

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	22P1		EF Tilton	1920	330	Tva		ese			ds	fa			250	165		
13 05E	22P2	*	EF Tilton	1800	295	Tva		ese			xs				165			
13 05E	22P20		EF Tilton	1920	335	Qdht		ese				fa			250			
13 05E	23A1	*	EF Tilton	3100	315	Tva		se	15		ss	fa			163	106		
13 05E	23C1	*	EF Tilton	2040	150	Tva		se			ds	fa			250			
13 05E	23C2	*	EF Tilton	2100	340	Qdht		se			ss	fa			250			
13 05E	23C20	*	EF Tilton	2040	360	Qdht		se	12	15	ss	fa			160			
13 05E	23C21	*	EF Tilton	1880	350	Qdht		se	12	15	ss	fa			250			
13 05E	23C22	*	EF Tilton	1860	330	Qdht		se	12	15	ss	fa			160			
13 05E	23C23	*	EF Tilton	1860	350	Qdht		se	12	15	ss	fa			160			
13 05E	23C24	*	EF Tilton	1840	360	Qdht		se	12	15	ss	fa			160			
13 05E	23C25	*	EF Tilton	1840	340	Qdht		se	12	15	ss	fa			160			
13 05E	23D1	*	EF Tilton	2040	325	Tva	Qdht	se	15		ss	fa			160	165		
13 05E	23D2	*	EF Tilton	2040	124	Qdht		se	15		ds	fa			165			
13 05E	23D20	*	EF Tilton	1040	155	Qdht		se	15		ds	fa			165			
13 05E	23D21	*	EF Tilton	2000	125	Qdht	Tva	se	15		xs	fa			160			
13 05E	23D22	*	EF Tilton	2000	150	Qdht	Tva	se	15		xs	fa			160			
13 05E	23D23	*	EF Tilton	1920	145	Qdht	Tva	se	15		xs	fa			160			
13 05E	23D3	*	EF Tilton	2100	165	Qdht		se	15		ds	fa			165			
13 05E	23D4	*	EF Tilton	2080	124	Qdht		se	15		ds	fa			165			
13 05E	23G1	*	EF Tilton	2480	320	Tva		se	12	15	ss	fa			165			
13 05E	23H1	*	EF Tilton	1640	315	Tva		se	12	15	ss	fa			106			
13 05E	23J2	*	EF Tilton	2800	310	Tva		se	12	15		fa			165			
13 05E	23P20	*	EF Tilton	2680	295	Qdht	Tva	se	12	15	ss	fa			163			
13 05E	23P21	*	EF Tilton	3000	310	Qdht	Tva	se	12	15	ss	fa			163			
13 05E	23R20	*	EF Tilton	3040	330	Qdht		se	12	15	ss	fa			163			
13 05E	24A1	*	EF Tilton	3000	15	Toh					xs			pl	163	161		
13 05E	24C1	*	EF Tilton	3000	320	Tva					xs	fa			163	161		
13 05E	24G1	*	EF Tilton	3200	0	Tva	Toh				ss				161	31		
13 05E	24N20		EF Tilton	4000	35	Toh					xs				220	32		
13 05E	25A1	*	EF Tilton	4000	30	Toh		ese	12	25	ds				185	186	219	
13 05E	25B1	*	EF Tilton	4000	275	Qls		ese	12	25	ss				185	220	32	
13 05E	25B2	*	EF Tilton	3300	250	Qls		ese	12	25	ss				32			
13 05E	25B3	*	EF Tilton	4000	270	Qls		ese	12	25	ss				220			
13 05E	25F1	*	EF Tilton	3400	260	Qls		ese	12	25	ss				31	32		
13 05E	25F20	*	EF Tilton	3320	235	Qls		ese	12	25	xs				32			
13 05E	25F21	*	EF Tilton	3600	300	Qls		ese	12	25	ss				32			
13 05E	25F22	*	EF Tilton	3440	270	Qls		ese	12	25					32			
13 05E	25G1	*	EF Tilton	3300	220	Qls		ese	12	25	xs	fa			185	220	32	162
13 05E	25G2	*	EF Tilton	4200	270	Qls		ese	12	25	ss				185			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAh	dsr	sc	fl				bg SU	3	1	720				
IIIAg	rxsr	sc	fl		pr?		SU	4	2	530				
IIIBk	ds	sc	fl			ex		3	1					
VIs5	sr-ef	sc	fl		pr?		I? SU?	4	1	1800				
IIIAh	dsr	sc	fl	hm	pr		SU bg? hw sh	4	1	480				
IIIAh	dsr	sc	fl	hm	pr		SU bg? hw sh on	4	1	880				
VBq3	da	sc	fl			ex		2	1	40				
IIIBk	ds	sc	fl			ex	SU wt	1	1	65				
IIIBk	ds	sc	fl			ex	SU	1	1	60				
IIIBk	ds	sc	fl			ex	SU	1	1	80				
IIIBk	ds	sc	fl			ex	SU	1	1	40				
IIIBk	ds	sc	fl			ex	SU	1	1	55				
IIIAh	dsr	sc	fl		pr		h SU	3	1	820				
IIIBk	ds	sc	fl			ex	SU	2	1	40				
IIIAh	dsr	sc	fl				SU	3	2	80				
IIIAg	rxsr	sc	fl				bg SU on	3	1	500				
VBq3	da	sc	fl			ex		1	1	55				
VBq3	da	sc	fl			ex		1	1	50				
IIIBk	ds	sc	fl			ex		1	1	60				
VBq3	da	sc	fl			ex	SU	2	1	90				
IIIBk-VII	ds-sc	sc	fl				dp (ex)	2	2	30	80			
IIIBk-VII	ds-cb	sc	fl				dp (ex)	2	1	880	160	1469		
VBq3	da	sc	fl				ch hw	3	3	400			3000	
IIIAh	dsr	sc	fl				(ex)	1	1	100				
VIs5	sr-ef	sc	fl	hm				4	3					
VBqt	dt						BIC ch	3	2	200				
VIs5	sr-ef	sc	fl					4	3	963	1000			
VIs5	sr-ef	sc	fl	hm			SU?	1	1					
VIs5	sr-ef	sc	fl	hm	pr			4	4	193				
VIs5	sr-ef	sc	fl	hm				4	3					
VIs5	sr-ef	sc	fl	hm			h	4	2	800				
Ia-IId1	rf-rt	sc					sh ch t	3	1	120				
VBq3	da	sc	fl			ex	ch	1	1	55				
Ia-IId1	rf-rt	sc					sh ch t	1	1	60				
IIIAh	dsr	sc	fl	hm	pr			4	1					
VBq3	da	sc	fl			ex	ch	1	1	50				
IIIBk	ds	sc	fl			ex		2	2	40				
IIIAh	dsr	sc	fl				bg	3	1					
VIs5	sr-ef	sc	fl	hm	pr		(ex) sw i on h	4	1	5685				
VBq3	da	sc	fl				sh ch t	3	1	270				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
	0	4	0	42	45				70		2	SW88 18 94 154-156
480	199806	50	9990288	45	52		52		7		2	SW88 18 94 154-156
	0	10	0				38		5			SW88 18 94 154-156
1800	2544696	100	254469600	20	19				70		2	SW88 18 95 188-189
1000	376992	60	22619520	21	15				70		2	SW88 18 95 188-189
1080	746444	80	59715533	22	16		18		2		2	SW88 18 95 188-189
80	2513	4	10053			50			70			SW88 18 95 188-189
60	3063	6	18378			33	50		70			SW88 18 95 188-189
50	2356	5	11781						70			SW88 18 95 188-189
85	5341	5	26704						5			SW88 18 95 188-189
40	1257	4	5027						5			SW88 18 95 188-189
40	1728	4	6912						5			SW88 18 95 188-189
910	586065	80	46885238	16	30		33		5		2	SW88 18 95 188-189
80	2513	12	30159	28					15		2	SW88 18 95 188-189
120	7540	6	45239						15			SW88 18 95 188-189
650	255255	60	15315300			28			15			SW88 18 95 188-189
30	1296	5	6480				45		15			SW88 18 95 188-189
30	1178	4	4712				45		15			SW88 18 95 188-189
30	1414	8	11310	39		25	43		15		x	SW88 18 95 188-189
25	1767	8	14137	28					15		2	SW88 18 95 188-189
30	707	5	3534	39					70	trb	2	SW88 18 95 188-189
100	69115	4	276461	24					70	trb	5	SW-C-78 46B-36
400	125664	4	502656	25	32				70	EF Tilton R	2	SW88 18 95 188-189
120	9425	15	141372						4			SW88 18 95 188-189
	0	80	0						15			SW88 18 95 188-189
120	18850	15	282744			30			1			SW88 18 95 188-189
1000	756340	70	52943814	22	19				70		2	SW88 18 96 223-224
	0	100	0						70			SW88 18 96 223-224
1900	288006	50	14400309	16	15				70		2	SW88 18 96 223-224
	0	100	0						70			SW88 18 96 223-224
2400	1507968	100	150796800	20	13				90		4	SW88 18 96 221-222
231	21771	4	87085	27	30				8		x	SW88 18 96 221-222
35	1512	4	6048	50	24		44		8			SW-C-78 46B-36
539	25400	4	101599	39	27				8		2	SW88 18 96 221-222
1505	0	4	0	34	27				8		2	SW88 18 96 221-222
30	1178	4	4712						8			SW88 18 96 221-222
40	1257	4	5027						8			SW88 18 96 221-222
	0	25	0						8			SW88 18 96 221-222
5600	25003994	110	2750439384	28	25				70		2	SW88 18 96 221-222
150	31809	4	127235	36	36				90		5	SW88 18 96 221-222

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	25G3	*	EF Tilton	4080	251	Qls		ese	12	25	ss				185			
13 05E	25H1	*	EF Tilton	4040	100	Toh		ese	12	25	xs				186			
13 05E	25H20	*	EF Tilton	4160	65	Toh		ese	12	25	xs				186			
13 05E	25H22	*	EF Tilton	4120	80	Toh		ese	12	25	xs				186			
13 05E	25H23	*	EF Tilton	3800	10	Toh		ese	12	25	xs				185			
13 05E	25K1	*	EF Tilton	4240	286	Qls		ese	12	25	ss				185			
13 05E	25L1	*	EF Tilton	3440	300	Qls		ese	12	25	xs				220			
13 05E	25L2	*	EF Tilton	3400	305	Qls		ese	12	25	xs				32			
13 05E	25L20	*	EF Tilton	3400	305	Qls		sw	12		xs	fa			32			
13 05E	25L21	*	EF Tilton	3560	245	Qls		sw	12		xs	fa			32			
13 05E	25L3	*	EF Tilton	4000	295	Qls		sw	12		xs	fa			220	32		
13 05E	26B1		EF Tilton	3000	285	Tva		sw	12		ss	fa			160			
13 05E	27A1		EF Tilton	2600	325	Tva		sse			xs			pl?	163			
13 05E	27B1		EF Tilton	2280	235	Tva		sse			xs			pl	163			
13 05E	27C1	*	EF Tilton	1840	200	Tva	Qls	sse			xs			pl	250	165		
13 05E	27D1	*	EF Tilton	1820	340	Tva	Qls	sse			ss				165			
13 05E	27D2	*	EF Tilton	1700	340	Qls	Qdht	sse			xs				165			
13 05E	27D20	*	EF Tilton	1700	340	Qls	Qdht	sse			xs				165			
13 05E	27F1		EF Tilton	1880	50	Qls		sse			xs			pl	250			
13 05E	28A1	*	EF Tilton	1900	5	Qls	Qdht				xs	fa			161	165		
13 05E	28C1	*	EF Tilton	1800	340	Qdht		e			xs	fa			161			
13 05E	28C2	*	EF Tilton	1600	350	Qdht		e			xs	fa			161	146		
13 05E	28C20	*	EF Tilton	1800	340	Qdht		e			xs	fa			161	146		
13 05E	28D20	*	EF Tilton	1800	355	Qdht		e			xs	fa			250			
13 05E	28G1		EF Tilton	2100	340	Tva		ne	55		xs	fa			251	161		
13 05E	28N1		EF Tilton	2200	230	Tva		ne	55		xs				250			
13 05E	29A1		EF Tilton	1640	20	Tva		ne	55		xs			pl?	161			
13 05E	29A2		EF Tilton	1620	230	Tva		ne	55		ds				161			
13 05E	29A3		EF Tilton	1400	25	Qdht		ne	55		ds				161			
13 05E	29A4		EF Tilton	1400	15	Qdht		ne	55		ds				161			
13 05E	29A5		EF Tilton	1400	10	Qdht		ne	55		ds				161			
13 05E	29A6		EF Tilton	1400	355	Qdht		ne	55		ds				161			
13 05E	29A7		EF Tilton	1400	355	Qdht		ne	55		ds				161			
13 05E	29B1		EF Tilton	1640	5	Tva		ne	55		xs			pl?	161			
13 05E	29B2		EF Tilton	1400	55	Tva		ne	55		ds				198	161		
13 05E	29B20		EF Tilton	1480	35	Qdht		ne	55		ds				161			
13 05E	29B21		EF Tilton	1520	15	Qdht		ne	55		ds				161			
13 05E	29B22		EF Tilton	1480	5	Qdht		ne	55		ds				161			
13 05E	29B3		EF Tilton	1400	295	Tva		ne	55		xs				146	147		
13 05E	29C21		EF Tilton	1400	193	Qdht		ne	55		xs				203			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl				sh ch t	3	1	193				
VBq3	da	sc	fl			ex	BIC sh	2	1	80				
VBq3	da	sc	fl			ex	ch	2	1	20				
VBq3	da	sc	fl			ex	ch	2	1	20				
VBq3	da	sc	fl			ex	ch	3	1	60				
Ia-IId1	rf-rt	sc					sh ch t	1	1	250				
VBq3-VII	da	sc	fl			ex	dp ch	1	1	120				
VBq3-VII	da	sc	fl			ex	dp ch	2	1	120				
VBq3-VII	da-sc	sc	fl			ex	ch	1	1	80				
VBq3	da	sc	fl			ex		2	1	40				
VBq3-VII	da-ld	sc	fl			ex	ch	2	1	40				
VIs5	sr-ef	sc	fl	hm?	pr		SU?	4	3	165				
IIIBk	ds						BIC	3	4	60				
IIIBk	ds						BIC	3	4	60				
IIIAh	dsr	sc	fl				SU bg (ex)	3	1	335				
IIIAh	dsr	sc	fl				SU bg on	3	1	415				
IIIAh	dsr	sc	fl			ex		4	1	60				
VBq3	da	sc	fl			ex		2	1	40				
IIIBk	ds	sc?					BIC	3	4	100				
IIIAh	dsr	sc	fl				SU I	4	2	838				
IIIAh	dsr	sc	fl	hm	pr		SU	4	1	530				
IIIAh	dsr	sc	fl	hm	pr		SU I	4	1	790				
VBq3-VII	da-sc	sc	fl	hm		ex		1	1	30				
IIIAh	dsr	sc	fl	hm			hw SU? on	4	2					
VIs5	sr-ef	sc	fl		pr?		hw SU? on	4	3	1480				
Ia-IId1	rf-rt	sc				ex	t? c	2	1	50				
IIIAh	dsr	sc	fl			ex	(ex) ch dp on	4	1	80	575			
VBq3	da		fl			ex		2	1	60				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	40				
IIIAh	dsr	sc	fl				(ex) SU bg	4	1	450				
IIIAh	dsr	sc	fl				SU	2	2	390				
VBq3	da	sc	fl			ex		2	1	60				
VBq3	da	sc	fl			ex		2	1	60				
VBq3	da	sc	fl			ex		2	1	60				
VBq3	da	sc	fl				ch SU?	2	2	150				
IIIAh	dsr	sc	fl					4	4	200				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
110	16674	4	66696	28	39				90		5	SW88 18 96 221-222
115	7226	4	28903	34	45	45			8		5	SW88 18 96 221-222
20	314	4	1257						90			SW88 18 96 221-222
20	314	4	1257						90			SW88 18 96 221-222
80	3770	4	15080						90			SW88 18 96 221-222
308	60476	4	241903	39	34	44			90		5	SW88 18 96 221-222
120	11310	4	45239	33	27				8		5	SW88 18 96 221-222
120	11310	30	339293	31	30	31			8		5	SW88 18 96 221-222
40	2513	6	15080						8			SW88 18 96 221-222
35	1100	3	3299						8			SW88 18 96 221-222
40	1257	6	7540	32	34				8		5	SW88 18 96 221-222
	0	100	0			30			8		2	SW88 18 95 186-187
60	2827	4	11310	28					50		5	SW88 18 94 153
40	1885	4	7540	17					50		5	SW88 18 94 153
585	153919	40	6156751	32	28		34		8		5	SW88 18 94 153
250	81485	40	3259410	39	39	40			8		3	SW88 18 94 153
300	14137	50	706860	18	39		34		8		3	SW88 18 94 153
30	942	4	3770						8			SW88 18 94 153
50	3927	4	15708	28					8		5	SW88 18 94 153
800	526532	50	26326608	30	29				5		3	SW-C-78 47D-22
420	174830	50	8741502	24	27	43			5		3	SW88 18 93 115-116
790	490168	50	24508407	39	39	42			5		3	SW88 18 93 115-116
20	471	3	1414			40			5			SW88 18 93 115-116
	0	60	0						5			SW88 18 93 115-116
1000	1162392	50	58119600	30	28				5		3	SW88 18 93 115-116
845	33183	4	132733	35	40				90		5	SW88 18 93 115-116
15	942	50	47124	23	31	40	40	55	12		2	SW88 18 92 87-89
15	707	4	2827	34		53			12		2	SW88 18 92 87-89
15	471	4	1885			50			12			SW88 18 92 87-89
15	471	4	1885			50			12			SW88 18 92 87-89
15	471	4	1885			50			12			SW88 18 92 87-89
15	471	4	1885			50			12			SW88 18 92 87-89
15	471	4	1885			50			12			SW88 18 92 87-89
400	141372	50	7068600	31	27				12		2	SW88 18 92 87-89
300	91892	40	3675672	39	28	52			12		2	SW88 18 92 87-89
45	2121	6	12723			47			12			SW88 18 92 87-89
45	2121	6	12723			47			12			SW88 18 92 87-89
45	2121	6	12723			47			12			SW88 18 92 87-89
200	23562	8	188496	22	25				12		2	SW88 18 92 87-89
150	23562	35	824670				23		5			SW88 18 92 87-89

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	29D20		EF Tilton	1400	165	Qdht		ne	55		xs				200			
13 05E	29E1		EF Tilton	1340	350	Qdht		ne	55		xs			pl	146	147		
13 05E	29F1		EF Tilton	1480	355	Qdht		ne	55		xs			pl	146	147		
13 05E	29G1		EF Tilton	1500	295	Qdht		ne	55		xs				146	147		
13 05E	29G2		EF Tilton	1500	345	Qdht		ne	55		xs			pl	146	147		
13 05E	29G3		EF Tilton	1480	5	Qdht		ne	55		xs			pl	146	147		
13 05E	29Q1		SF Tilton	1280	230	Qdht		ne	55		ss	fa		pl	146	50		
13 05E	29Q20		SF Tilton	1400	230	Qdht		ne	55		ss				146			
13 05E	30Q1		SF Tilton	1800	10	Tpg		sse			ss	fa			251			
13 05E	30Q2	*	SF Tilton	2000	45	Tpg		sse			ss				231	233		
13 05E	30Q20	*	SF Tilton	2000	10	Tpg		sse			ss				251			
13 05E	30R1	*	SF Tilton	1900	39	Tpg		s	55	34	ss				231			
13 05E	30R2		SF Tilton	1800	77	Tpg		s	55	34	ss				231			
13 05E	30R20		SF Tilton	2200	35	Tpg		s	55	34	ss				231	251		
13 05E	31A1	*	SF Tilton	2200	20	Tpg					ss	fa			233			
13 05E	31B1	*	SF Tilton	2200	29	Tpg					ss	fa			233			
13 05E	31B20		SF Tilton	2200	45	Tpg					ss				233			
13 05E	32D1	*	SF Tilton	2000	140	Tpg					xs			pl	233			
13 05E	32D2	*	SF Tilton	2000	5	Tpg					xs				233			
13 05E	32D20	*	SF Tilton	1800	333	Tpg					ss				233			
13 05E	32D21	*	SF Tilton	1800	100	Tpg					ss				233			
13 05E	32D22	*	SF Tilton	1800	100	Tpg					ss				233			
13 05E	32D23	*	SF Tilton	2000	135	Tpg					xs				233			
13 05E	32D24	*	SF Tilton	1800	35	Tpg					ss				233			
13 05E	32D25	*	SF Tilton	1960	95	Tpg					xs				233			
13 05E	32E20	*	SF Tilton	2200	65	Tpg					ss				233			
13 05E	32E21	*	SF Tilton	2080	345	Tpg					ss				233			
13 05E	32E22	*	SF Tilton	1600	30	Tpg					xs			pl	233			
13 05E	32F20	*	SF Tilton	1800	5	Tpg					ss				233			
13 05E	32F21	*	SF Tilton	1720	68	Tpg					ss				233			
13 05E	32K1	*	SF Tilton	2200	85	Tva					xs	fa			165			
13 05E	32K3	*	SF Tilton	2600	30	Tva					ss	fa		pl	165			
13 05E	32L1	*	SF Tilton	2600	325	Tva					ss	fa			231	161		
13 05E	32R20	*	SF Tilton	2600	325	Tva					ss				231			
13 05E	33B1	*	SF Tilton	2000	195	Tva		nne			ss				200	146		
13 05E	33G20	*	SF Tilton	1400	15	Tpg						fa			50			
13 05E	33J1	*	SF Tilton	2800	0	Tva		s		50	ss				184			
13 05E	33J2	*	SF Tilton	2000	5	Tva		s		50	ss				161			
13 05E	33N1	*	SF Tilton	2800	355	Tva		s		50	ss				184			
13 05E	33P1	*	SF Tilton	2800	5	Tva		s		50	ss				184			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl					4	4	30				
IIIAh	dsr	sc	fl				SU bg	4	1	390				
IIIAh	dsr	sc?	fl		pr?		SU	4	4	500				
VBq3	da	sc	fl				ch bg	3	1	180				
VBq3	da	sc	fl				ch bg	3	1	125				
VBq3	da	sc	fl				ch bg	3	1	190				
IIIBk-VII	ds-cb	sc	fl				bg (ex)	3	2	185				
VIs5	sr-ef	sc	fl	hm				3	2					
VBq3	da	sc	fl			ex	hw h	3	2	150				
IIIBk	ds	sc	fl					2	1	90				
IIIBk	ds	sc	fl				hw h	3	2	50				
IIIAg	rxsr	sc	fl				hw h ch	3	4	90				
VBq3	da	sc	fl				hw h ch	3	3	194				
VIs5	sr-ef	sc	fl	hm			dp	4	2					
IIIAg	rxsr	sc	fl				h hw	4	2	500				
IIIAg	rxsr	sc	fl				h hw (ex)	4	2	800				
VBq3	da							2	2	50				
VBq3	da	sc	fl			ex		1	1	70				
IIIBk-VII	ds-cb	sc	fl			ex		1	1	35				
VBq3-VII	da-sc	sc	fl			ex		1	1	50				
VBq3-VII	da-sc	sc	fl			ex		1	1	50				
VBq3-VII	da-sc	sc	fl			ex		1	1	30				
VBq3	da	sc	fl				dp	3	2	70				
VBqt-VII	dt-sc	sc	fl			ex	ch	3	1	50				
VBq3	da	sc	fl					1	2	50				
VIs5	sr-ef	sc	fl				dp	1	2	30				
VBq3	da-sc	sc	fl			ex		2	1	50				
VBqt	dt	sc	fl			ex	ch	1	1	50				
VBqt	dt	sc	fl			ex	ch	1	1	50				
VBqt	dt	sc	fl			ex	ch	1	1	100				
VBqt	dt	sc					ch	3	3	60				
IIIAg	rxsr	sc					hw sh	2	1	580				
VBq3-VII	da-sc	sc	fl			ex	dp	2	1	175	245			
VBq3	da	sc	fl			ex	dp	3	3	30	245			
IIIAg	rxsr	sc	fl		pr?		hw af i	4	3	1035				
VBq3	da	sc	fl		pr?		hw af i	1	1	30				
VBq3	da	sc	fl				c hw	3	2	130				
VBq3	da	sc	fl				c hw	3	2	150				
VBq3	da	sc	fl				c hw	3	2	50				
VBq3	da	sc	fl				c hw	3	2	80				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
20	471	8	3770						5			SW88 18 92 87-89
400	122522	30	3675672	28	20		35		12		2	SW88 18 92 87-89
735	288635	30	8659035	20	27	25			12		2	SW88 18 92 87-89
75	10603	4	42412	27					12		5	SW88 18 92 87-89
70	6872	4	27489	34					12		5	SW88 18 92 87-89
115	17161	4	68644	45					12		5	SW88 18 92 87-89
305	44316	7	310213	16					4		2	SW88 18 92 87-89
	0	20	0						4			SW88 18 92 87-89
200	23562	4	94248	22					90		5	SW88 17 90 20-21
40	2827	8	22620	25	39	41			90		5	SW88 17 90 20-21
	0	4	0						90			SW88 17 90 20-21
70	4948	25	123700	27	29	28	45		90		5	SW88 17 90 20-21
100	15237	8	121894	22	27				90		5	SW88 17 90 20-21
	0	40	0						90			SW88 17 90 20-21
400	157080	40	6283200	27	27	30	43		90		5	SW88 18 91 18-20
800	502656	50	25132800	27	27	36	45		90		5	SW88 18 91 18-20
50	1964	4	7854						90			SW88 18 91 18-20
60	3299	40	131947	31					3		5	SW88 18 92 85-87
800	21991	50	1099560	25			46		3		5	SW88 18 92 85-87
60	2356	3	7069				36	43	4			SW88 18 92 85-87
20	785	3	2356				36	43	4			SW88 18 92 85-87
20	471	3	1414				36	43	4			SW88 18 92 85-87
60	3299	12	39584				36	43	4			SW88 18 92 85-87
50	1964	5	9818						4			SW88 18 92 85-87
30	1178	4	4712						4			SW88 18 92 85-87
	0	100	0						4			SW88 18 92 85-87
50	1964	4	7854					43	4			SW88 18 92 85-87
30	1178	4	4712						4			SW88 18 92 85-87
50	1964	4	7854						4			SW88 18 92 85-87
70	5498	3	16493				45	44	4			SW88 18 92 85-87
60	2827	4	11310	45					90		5	SW88 18 92 85-87
575	261931	30	7857927	30	45			50	90		5	SW88 18 92 85-87
175	24053	12	288635	40	36			48	90		5	SW88 18 92 85-87
40	942	4	3770	40	36				90			SW88 18 92 85-87
830	674698	20	13493957	22	34				10			SW88 18 93 113-114
830	19556	3	58669	22	34				9			SW88 18 93 113-114
155	15826	4	63303	78	50				90			SW88 18 93 113-114
470	55371	4	221483	48	45				90		4	SW88 18 93 113-114
365	14334	4	57334	58	59				90		5	SW88 18 93 113-114
470	29531	4	118124	68	49				90		5	SW88 18 93 113-114

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 05E	33P2	*	SF Tilton	3000	5	Tva		s		50	ss				184			
13 05E	33P20	*	SF Tilton	2200	5	Tva		s		50	ss				184			
13 05E	33P3	*	SF Tilton	3000	5	Tva		s		50	ss				184			
13 05E	33Q1	*	SF Tilton	3000	0	Tva		s		50	ss				184			
13 05E	33Q2		SF Tilton	2660	345	Tva		s		50	ss				184			
13 05E	33R1		SF Tilton	2400	45	Tva					ss				184			
13 05E	34C1		SF Tilton	2220	205	Tva		nne			ss				184			
13 05E	34C20		SF Tilton	2400	15	Tva		ne			ss				184			
13 05E	34C21		SF Tilton	2220	205	Tva		ne			ss				184			
13 05E	34N1		SF Tilton	2200	210	Tva		ne			ds				184			
13 05E	35D1		SF Tilton	2640	330	Tva		sw			ds				165			
13 05E	35D2		SF Tilton	2560	350	Tva		sw			ds				165			
13 05E	35E2		SF Tilton	2520	260	Tva		sw			ss				164	250		
13 05E	35F1		SF Tilton	2400	260	Tva		sw			ds				164			
13 05E	35F2		SF Tilton	2120	200	Tva		sw			ss				160			
13 05E	35J1	*	SF Tilton	3080	220	Tia		sw			ss				11	32		
13 05E	35M1		SF Tilton	2280	215	Tva		sw			xs				160			
13 05E	36A20	*	Rainey C	4280	55	Tia	Tva2	ne			ds				32		71	
13 05E	36C1	*	EF Tilton	4040	275	Toh	Tia	ne			ds				32			
13 05E	36C20	*	SF Tilton	3720	265	Tia		ne			ss				32			
13 05E	36C21	*	SF Tilton	3440	260	Tia		ne			ss				32			
13 05E	36C22	*	SF Tilton	3520	270	Tia		ne			ds				32			
13 05E	36C23		SF Tilton	3560	50	Tia		ne			ds				32			
13 05E	36E1	*	SF Tilton	4040	275	Tia	Toh	ne			ss				220	32		
13 05E	36E2	*	EF Tilton	4040	275	Tia	Toh	ne			ss				32	215		
13 05E	36E20		SF Tilton	3720	255	Tia		ne			ss				215			
13 05E	36K1	*	Rainey C	4200	45	Tia	Toh	e			ss				185			
13 05E	36K2	*	Rainey C	4280	225	Toh		e			ss				32		186	
13 05E	36L1	*	SF Tilton	3800	250	Tia	Toh	e			ss				220			
13 05E	36L2		SF Tilton	3800	240	Tia	Toh	e			ss				220			
13 05E	36L3		SF Tilton	3600	245	Tia		e			ss				220			
13 05E	36L4		SF Tilton	3560	235	Tia		e			ss				220			
13 05E	36R1	*	Rainey C	4080	225	Tia		e			ss				186			
13 06E	05A1	*	Mineral C	3940	270	Tva	Toh	sw							32	40	12	13
13 06E	05A20		Mineral C	3760	280	Toh		sw	58		xs				40	32		
13 06E	05A21		Mineral C	3680	290	Toh		sw	58		xs				40			
13 06E	05A22		Mineral C	3440	275	Toh		sw	58		xs				40			
13 06E	05D20	*	Mineral C	2260	115	Toh		sw	58		xs				12			
13 06E	05D21	*	Mineral C	2700	100	Tva		sw	58		xs				161			
13 06E	05D22	*	Mineral C	2260	245	Tva		sw	58		xs				161			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl				c hw	2	2	80				
VBq3	da	sc	fl				c hw	3	3	80				
VBq3	da	sc	fl				c hw	3	2	70				
VBq3	da	sc	fl				c hw	3	2	70				
VBq3	da	sc	fl				c hw	3	2	315				
VBq3	da	sc	fl				ch dp	2	2	1020				
VIs5	sr-ef	sc					i h c af?	4	3	800	1200			
VBq3	da	sc					BIC	3	2	30	1200			
VBq3	da	sc					BIC	3	2	30	1200			
VBq3	da	sc	fl				(ex)	3	2	50				
IIIBk	ds						BIC	3	4	45				
IIIBk	ds						BIC	3	4	50				
VIs5	sr-ef	sc	fl	hm			gft	4	2					
VIs5	sr-ef	sc	fl?				ex? BIC	3	4	300				
IIIBk	ds						BIC	3	3	60				
VIs5	sr-ef	sc	fl	hm	pr		l	4	1	800	1000			
IIIBk	ds	sc					BIC	3	3	65				
VIs5	sr-ef	sc	fl			ex	dp l	2	2	700				
VBqt	dt	sc	fl			ex	dp SU?	2	1	30				
IIIBk	ds	sc	fl					3	4	200				
VBqt	dt	sc	fl			ex	ch sed	2	1	80				
VBqt	dt	sc	fl				SU?	2	3	50				
VBqt	dt	sc	fl			ex	SU?	3	1	50				
VBqt-VII	dt-rd	sc fl					dp ch h	3	1	50		155	580	
VIs5	sr-ef	sc	fl	hm			on l	4	2	1360				
VBq3	da	sc					(ex) ch	2	2	40				
VBq3	da	sc				ex	rx c t ch	3	1	150				
Ia-IId1	rf-rt	sc					sh t c BIC	1	1	20				
Vbq3	da	sc?					BIC sh h	3	3	115	360			
Vbq3	da	sc?					BIC sh h	3	3	80	235			
Vbq3	da	sc?	fl				BIC sh h ch	3	2	80	580			
Vbq3	da	sc					ch BIC	3	3	50				
Vbq3	da	sc?	fl			ex	BIC sh h	2	1	110	1125			
VIs5	sr-ef	sc	fl	hm	pr		i on SU?	4	1	2200	1100			
VBq3	da	sc	fl				ch bg	3	2	90				
VBq3	da	sc	fl				(ex) ch	2	1	80				
VBq3	da	sc	fl			ex	ch	2	1	30				
VBq3	da	sc	fl			ex	SU?	2	1	90				
IIIBk	ds	sc	fl			ex	SU	1	1	150				
IIIBk	ds	sc	fl			ex	SU	1	1	150				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
370	23248	4	92991	68	63				90		5	SW88 18 93 113-114
260	16336	4	65345	62	56				90			SW88 18 93 113-114
260	14294	4	57177	62	56				90		5	SW88 18 93 113-114
365	20067	4	80268	62	56				90		5	SW88 18 93 113-114
470	116278	4	465114	78	56				90		5	SW88 18 93 113-114
	0	4	0	45	45				90		5	SW88 25 96 103
1440	904781	60	54286848						90			SW88 18 94 153
1440	33929	4	135717						90			SW88 18 93 113-114
1440	33929	4	135717						90			SW88 18 93 113-114
50	1964	4	7854						90		5	SW88 25 96 103
40	1414	4	5655	28					99		x	SW88 18 95 184-185
45	1767	4	7069	28					99		x	SW88 18 95 184-185
	0	80	0						55			SW88 18 95 184-185
170	40055	25	1001385	39	33				55		x	SW88 18 95 184-185
50	2356	4	9425	39					55		5	SW88 18 95 184-185
650	408408	80	32672640	23	21				15		4	SW88 18 95 184-185
45	2297	5	11486	39					55		x	SW88 18 95 184-185
900	494802	25	12370050			40			9			SW88 18 96 219-220
20	471	2	942			43	50		55			SW88 18 96 219-220
250	39270	15	589050				40	45	55			SW88 18 96 219-220
40	2513	4	10053						55			SW88 18 96 219-220
175	6872	6	41234						9			SW88 18 96 219-220
35	1374	4	5498						9			SW88 18 96 219-220
48	1885	4	7540	58					24		5	SW-C-78 46B-36
2330	2488776	60	149326531	23	30				55		4	SW88 18 96 219-220
40	1257	4	5027						55			SW88 18 96 219-220
1400	164934	4	659736	18	22				55		4	SW88 18 96 219-220
80	1257	4	5027	32	36	42	47		55		4	SW88 18 96 219-220
150	13548	4	54193	34	39				55		4	SW88 18 96 219-220
20	1257	4	5027	34					55		4	SW88 18 96 219-220
60	3770	4	15080	39					55		5	SW88 18 96 219-220
40	1571	4	6283	39					55		5	SW88 18 96 219-220
210	18143	4	72571	39	45		46		55		4	SW-C-78 46B-36
4845	8371579	120	1004589432	34	23				15	Mineral C	2	SW-C-78 49B-37
80	5655	6	33929						15			SW88 19 98 36
80	5027	4	20106						15			SW88 19 98 36
20	471	4	1885						15			SW88 19 98 36
	0	4	0						20			SW88 19 98 36
10	1178	4	4712						20			SW88 19 98 36
10	1178	4	4712						5			SW88 19 98 36

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	05E1		Mineral C	2400	200	Tva		sw	58		xs				15			
13 06E	05E20	*	Mineral C	2380	360	Toh		sw	58		ss				15			
13 06E	05G20		Mineral C	2800	175	Toh		sw	58		ds				161			
13 06E	05L1		Mineral C	2360	270	Toh		sw	58		xs				15			
13 06E	05L2		Mineral C	2360	230	Toh		sw	58		xs				15			
13 06E	05L20	*	Mineral C	2360	90	Toh		sw	58		xs				15			
13 06E	05L3	*	Mineral C	2400	55	Toh		sw	58		xs				15			
13 06E	06C1	*	Mineral C	3380	90	Tva		e			ds				33			
13 06E	06C20		Mineral C	3100	90	Tva		e			ds				33			
13 06E	06D1		Gallup C	3200	325	Tva		e			ss				40			
13 06E	06D20		Gallup C	3600	300	Tva		e			ss				33	181	220	181
13 06E	06D21		Gallup C	3460	300	Tva		e			ss				181			
13 06E	06J1		Mineral C	3300	70	Tva		e			ds				12		13	
13 06E	06J20		Mineral C	3080	60	Tva		e			ds				12			
13 06E	06P1		Gallup C	3900	270	Tva		e			ss				220		32	
13 06E	06P2		Gallup C	3600	273	Tva		e			ss				22	20		
13 06E	06P3		Gallup C	4120	320	Tva		e							185	216	220	
13 06E	06R1		Mineral C	3000	15	Tva		e							13			
13 06E	07B1		Gallup C	3660	173	Tva		se			ds				32			
13 06E	07D1		Mineral C	3800	320	Tva		se			ss				181		33	
13 06E	07D2	*	Gallup C	4160	355	Tva		se			xs				185		181	
13 06E	07D20	*	Gallup C	4240	355	Tva		se			ss				185			
13 06E	07D21	*	Gallup C	4000	355	Tva		se			ss				185			
13 06E	07D22	*	Gallup C	3800	355	Tva		se			ss				181			
13 06E	07N1		EF Tilton	3100	235	Tva		se	36		xs			pl	165			
13 06E	07N20		EF Tilton	3400	270	Tva		se	36		xs				33			
13 06E	07P20	*	EF Tilton	2920	145	Tva		se	36		ds				165			
13 06E	07P21	*	EF Tilton	2880	170	Tva		se	36		ds				165			
13 06E	07P22	*	EF Tilton	2880	175	Tva		se	36		ds				165			
13 06E	07P23	*	EF Tilton	2840	175	Tva		se	36		ds				165			
13 06E	07P24	*	EF Tilton	2800	180	Tva		se	36		ds				165			
13 06E	07P25	*	EF Tilton	2780	185	Tva		se	36		ds				165			
13 06E	07P26	*	EF Tilton	2780	185	Tva		se	36		ds				165			
13 06E	07P27	*	EF Tilton	2840	70	Tva		se	36		xs				161			
13 06E	07P28	*	EF Tilton	2800	155	Tva		se	36		xs				161			
13 06E	08A1		Mineral C	2800	190	Toh		sse			xs				25			
13 06E	08A20		Mineral C	2520	260	Toh		sse			xs				25			
13 06E	08C1		Mineral C	2900	170	Toh		sse			ds				15			
13 06E	08C20		Mineral C	2700	150	Toh		sse			ds				15			
13 06E	08H1		Mineral C	2700	80	Qdht		sse			xs				12	14		

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIBk-VII	ds-cb	sc	fl			ex		2	2	90				
VBq3	da	sc	fl			ex	ch SU	2	1	45				
VBq3	da	sc	fl			ex	SU?	2	1	35				
IIIBk-VII	ds-cb	sc	fl			ex	SU	1	1	40				
IIIBk-VII	ds-cb	sc	fl			ex	SU	1	1	50				
IIIBk	ds	sc	fl				(ex)	3	1	80				
IIIBk	ds	sc	fl			ex	SU	2	1	60				
IIIBk-VII	ds-sc	sc	fl			ex		1	2	20	145			
VBq3	da	sc	fl				(ex) ch BIC	3	2	30				
VBq3-VII	da-sc	sc	fl				(BIC) sh (ex)	3	1	105	460			
Ia-IId1	rf-rt	sc					BIC c t sh	1	1	20				
VBq3	da	sc	fl				ch BIC sh	2	1	40				
VIs5	sr-ef	sc		hm?			SU? on	4	3	2100				
VBqt	dt	sc	fl				(ex) ch BIC	3	3	60				
VBq3	da	sc	fl				dp c (ex)	3	2	130				
VBq3	da	sc	fl			ex	ch	2	1	60	210			
VBq3	da	sc	fl				ch	3	2	40				
VBq3	da	sc					ch (ex) BIC	2	2	50				
VBq3-VII	da	sc	fl			ex	c h	2	1	40				
VBqt	dt	sc	fl			ex	rx dp ch	2	1	75		170	910	
Ia-IId1	rf-rt	sc					BIC c rx t? sh	2	1	115				
VBq3	da	sc	fl				ch	1	1	50				
VBq3	da	sc	fl				ch	3	1	60				
VBq3	da	sc	fl				ch	1	1	50				
VBqt-VII	dt-sc	sc	fl			ex	dp ch	3	2	30		70	1370	
VBqt	dt	sc	fl				(ex) ch	3	3	75				
VBqt	dt	sc	fl			ex	SU	1	1	33				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	1	1	20				
VBqt	dt	sc	fl			ex	SU	2	1	35				
VBqt	dt	sc	fl			ex	SU	2	1	35				
IIIAg	rxsr	sc	fl				(ex) on	2	3	500				
VBq3	da	sc	fl			ex	ch	2	1	35				
IIIBk	ds	sc	fl			ex		2	1	250				
VBq3	da	sc	fl			ex		2	1	55				
IIIah	dsr	sc	fl				bg	4	4	187				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
915	64678	2	129355	30	45				20	Mineral C	2	SW88 19 98 36
12	424	3	1272						20			SW88 19 98 36
30	825	4	3299						15			SW88 19 98 36
95	2985	3	8954	24					20	Mineral C	2	SW88 19 98 36
180	7069	4	28274	34	27				20	Mineral C	2	SW88 19 98 36
	0	4	0						20			SW88 19 98 36
45	2121	4	8482	23	23				20	Mineral C	2	SW88 19 98 36
125	1964	4	7854	25					70		x	SW88 18 97 266
30	707	4	2827						20			SW88 18 97 266
50	4123	4	16493	39					30		5	SW88 18 97 266
2000	31416	3	94248						30			SW88 18 97 266
20	628	4	2513						30			SW88 18 97 266
2400	3958416	120	475009920	22	30				30	Mineral C	2	SW88 18 97 266
60	2827	5	14137						30			SW88 18 97 266
120	12252	4	49009	40	51				30	trb	5	SW88 18 97 266
50	2356	4	9425	51					30		5	SW88 18 97 266
50	1571	4	6283	55					40		4	SW88 18 97 266
50	1964	5	9818	25					40		5	SW88 18 97 266
40	1257	4	5027	36					20		x	SW88 18 97 264
120	7069	4	28274	55					40		5	SW88 18 97 264
575	51935	4	207738	42	44				40		5	SW88 18 97 264
60	2356	4	9425			29			40			SW88 18 97 264
60	2827	4	11310						40			SW88 18 97 264
60	2356	4	9425						40			SW88 18 97 264
50	1178	5	5891	39					4	trb,Tilton R	4	SW88 18 97 264
45	2651	4	10603						4			SW88 18 97 264
80	2073	3	6220				48		4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
20	314	3	942						4			SW88 18 97 264
35	962	4	3848						4			SW88 18 97 264
35	962	4	3848						4			SW88 18 97 264
208	81682	35	2858856	39	25				20		5	SW88 19 98 34-35
20	550	4	2199						20			SW88 19 98 34-35
250	49088	3	147263	47	45				20	str	4	SW88 19 98 34-35
45	1944	4	7775						20			SW88 19 98 34-35
250	36717	45	1652285	30	20				20	str	5	SW88 19 98 34-35

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	08H20	*	Mineral C	2440	105	Toh		sse			xs				14			
13 06E	08J1		Mineral C	2800	150	Toh		sse	21		ds				32			
13 06E	08J20		Mineral C	3040	130	Toh		sse			ds				32			
13 06E	08J21		Mineral C	3100	65	Toh		sse			xs				32			
13 06E	08N20		Mineral C	3660	35	Toh		sse			xs				32			
13 06E	17C1		Mineral C	3900	70	Toh		sse			xs			pl	39		71	
13 06E	17H20		Mineral C	3380	10	Toh		sse			xs				14			
13 06E	18A1	*	EF Tilton	3900	250	Toh		se	36		xs			pl	40		32	
13 06E	18A20	*	EF Tilton	3840	235	Toh		se	36		xs			pl	32	40		
13 06E	18D1	*	EF Tilton	2640	85	Tva		se	36		xs				161			
13 06E	18E1		EF Tilton	3300	270	Toh		se	36		xs				13			
13 06E	18F1	*	EF Tilton	3400	290	Toh		se	36		ss				13	32		
13 06E	18F20		EF Tilton	2920	260	Toh		se	36		xs				71			
13 06E	18G20	*	EF Tilton	3560	290	Toh		se	36		ss				71	32		
13 06E	18K1	*	EF Tilton	3240	253	Toh		se	36		ss				71			
13 06E	18K2	*	EF Tilton	3300	140	Toh		se	36		ds				71			
13 06E	18K20	*	EF Tilton	3440	170	Toh		se	36		ds				24	32		
13 06E	18M1	*	EF Tilton	2700	295	Toh		se	12		ss				12			
13 06E	18P1	*	EF Tilton	3000	170	Toh		se	12		ds			pl	71		12	
13 06E	18Q1	*	EF Tilton	3160	172	Toh		se	12		ds			pl	24	32	39	
13 06E	18Q20	*	EF Tilton	2920	215	Toh		se	12		xs				12			
13 06E	18R20	*	EF Tilton	3780	170	Toh		se	12		xs			pl?	12	33		
13 06E	19B20	*	EF Tilton	3040	330	Tva2					ss				106	13		
13 06E	19C1	*	EF Tilton	2560	60	Toh					xs				165			
13 06E	19C2	*	EF Tilton	2560	55	Toh					xs				165			
13 06E	19C21	*	EF Tilton	2720	65	Toh					xs				12			
13 06E	19C3	*	EF Tilton	2720	70	Toh					xs				12		165	
13 06E	19E1	*	EF Tilton	3100	30	Toh					xs			pl	32		25	24
13 06E	19E2	*	EF Tilton	2920	60	Toh					xs				32			
13 06E	19F1	*	EF Tilton	2900	50	Toh					xs			pl	25		12	
13 06E	19F20	*	EF Tilton	2720	255	Toh					xs				25			
13 06E	19F21	*	EF Tilton	2880	270	Tva2					ss				25			
13 06E	19F22	*	EF Tilton	2960	295	Tva2					ss				25	32		
13 06E	19K1	*	EF Tilton	3700	275	Tva2					ss				33	32		
13 06E	19L1	*	EF Tilton	3100	55	Toh					xs			pl	32	25		
13 06E	20B1	*	EF Tilton	4500	265	Tva2		se			xs				220		40	
13 06E	20B20		EF Tilton	3900	240	Tva2		se			xs				220			
13 06E	20B21		EF Tilton	3800	275	Tva2		se			xs				220			
13 06E	20C1		EF Tilton	4280	255	Tva2		se			xs				220		40	
13 06E	20C20		EF Tilton	3560	240	Tva2		se			xs				40			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VBq3	da	sc	fl			ex	SU?	2	1	65				
IIIBk	ds	sc	fl			ex	sh dp s BIC	2	3	120		1800		
IIIBk	ds	sc	fl				BIC	3	3	30				
VBqt	dt	sc	fl				BIC ch sed	2	2	40				
IIIBk-VII	ds-sc	sc	fl			ex		2	2	35				
VIs5	sr-ef	sc	fl	hm			pd	4	4	1400	1450			
VBqt	dt						sed	2	3	80				
VIs5	sr-ef	sc	fl	hm	pr		gft l	4	1	600	2420			
IIIBk	ds	sc	fl			ex		2	1	40				
VBqt	dt-sc	sc	fl			ex	ch	2	1	50				
IIIAg	rxsr	sc	fl				rx i l	4	2	950				
VIs5	sr-ef	sc	fl				rx i l	4	3	675				
VBq3	da	sc	fl				bg ch	3	3	90				
VIs5	sr-ef	sc	fl	hm			l dp	4	2					
IIIAg	rxsr	sc	fl		pr?		bg	4	4	350				
VIs5	sr-ef	sc	fl	hm	pr		dp gft l	4	1	450				
IIIBk-VII	ds-cb	sc	fl					1	1	25				
Ia-IId1	rf-rt	sc					c rx SU	1	1	648		290		
VIs5	sr-ef	sc	fl	hm			SU dp	3	1	815	305			
VIs5	sr-ef	sc	fl	hm	pr?		SU? dp on	3	1	560	665			
VBq3-VII	da-sc	sc	fl			ex	dp	1	1	100				
VIs5	sr-ef	sc	fl	hm			SU?	2	2					
VIs5	sr-ef	sc	fl	hm			SU	3	1					
VBq3-VII	da-sc	sc	fl			ex	BIC SU ch	2	1	200				
VBq3-VII	da-sc	sc	fl			ex	BIC sh SU ch	2	1	140				
VBq3	da	sc	fl			ex		2	1	80				
VIs5	sr-ef	sc	fl	hm		ex	hd	3	1	600				
VIs5	sr-ef	sc	fl	hm			i SU? on	4	3	660	1974			
VBqt-VII	dt-cb	sc	fl			ex	dp	1	1	90				
IIIAg	rxsr	sc	fl		pr		SU	3	2	590				
IIIBk	ds	sc	fl			ex	SU	1	1	100				
IIIAg	rxsr	sc	fl				SU	3	2					
IIIAg	rxsr	sc	fl				l SU	3	3					
IIIAg	rxsr	sc	fl				BIC on	4	3	950				
VIs5	sr-ef	sc	fl	hm			r i	4	2	1225				
VBqt	dt	sc	fl				ch sh	3	1	70		1830		
VBqt	dt	sc	fl				(ex) ch BIC	2	1	60				
VBqt	dt	sc	fl				ch BIC	2	2	60				
VBqt	dt	sc	fl				ch sh	3	1	125		1900		
VBqt-VII	dt-sc	sc	fl			ex	ch BIC	2	1	55				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
80	4084	4	16336						20			SW88 19 98 34-35
150	14137	3	42412	32	24				20	str	5	SW88 19 98 34-35
115	2710	3	8129						20			SW88 19 98 34-35
40	1257	5	6283						20			SW88 19 98 34-35
45	1237	4	4948						20			SW88 19 98 34-35
600	659736	100	65973600	7	26				4	tb1		SW88 19 98 34-35
	0	5	0						4			SW88 18 96 262
310	146084	85	12417174	20	20	23			5	trb	4	SW88 18 96 262
40	1257	4	5027						4			SW88 18 96 262
70	2749	4	10996	45					4		4	SW88 18 96 262
695	518560	75	38892026	30	26				4	trb	3	SW88 18 96 262
410	217359	5	1086797	26	26	42	26		4	trb	3	SW88 18 96 262
50	3534	12	42412						4			SW88 18 96 262
	0	90	0						4			SW88 18 96 262
310	85216	45	3834715	31	30		30		4	trb	4	SW88 18 96 262
250	88358	60	5301450	24	23		43		4		4	SW88 18 96 262
200	3927	5	19635				43		4			SW88 18 96 262
220	111967	4	447866	39	40	43	45	28	4	trb	4	SW88 18 96 262
290	185629	50	9281465	27	34	28			4	trb	3	SW88 18 96 262
500	219912	65	14294280	22	31	12	34		4	Tilton R	3	SW88 18 96 262
60	4712	4	18850			40			4			SW88 18 96 262
	0	75	0						4			SW88 18 96 262
	0	80	0						8			SW88 18 97 260
70	10996	6	65974	29		45	50		4	Tilton R	2	SW88 18 97 260
50	5498	6	32987	39		38			4	Tilton R	2	SW88 18 97 260
80	5027	4	20106						8			SW88 18 97 260
300	141372	80	11309760	32	22		38		8		3	SW88 18 97 260
1830	948606	90	85374551	27	16				8	Tilton R	3	SW88 18 97 260
30	2121	8	16965			30	40		8			SW88 18 97 260
780	361441	45	16264849	18	27				8	Tilton R	3	SW88 18 97 260
100	7854	8	62832				49		8			SW88 18 97 260
	0	50	0						8			SW88 18 97 260
	0	50	0						8			SW88 18 97 260
1400	1044582	80	83566560	34	34	34	35		70	Tilton R	3	SW88 18 97 260
1325	1274802	85	108358202	20	27				5	Tilton R	3	SW88 18 97 260
60	3299	4	13195	42	42				70	EF Tilton R	5	SW88 19 98 30-31
60	2827	4	11310						70			SW88 19 98 30-31
60	2827	4	11310						70			SW88 19 98 30-31
90	8836	10	88358	22	37				70	EF Tilton R	5	SW-C-78 49B-35
45	1944	4	7775						5			SW88 19 98 30-31

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	20F1	*	EF Tilton	3400	240	Tva2		se			xs			pl	12	33	24	
13 06E	20G1	*	EF Tilton	4240	195	Tva2		se			xs				220		40	
13 06E	20K1	*	EF Tilton	3900	270	Tva2		se			ss				39	32		
13 06E	20Q1	*	EF Tilton	3600	240	Tva2		se			xs			pl?	32			
13 06E	29A1		EF Tilton	3900	280	Tva2		sse	22		xs				40			
13 06E	29N20		EF Tilton	3840	50	Tva2		sse	22		xs			pl?	32			
13 06E	30Q1	*	Rainey C	3800	150	Tva2					ds				32		39	11
13 06E	30R20	*	Rainey C	3800	150	Tva2					ds				39		32	
13 06E	31G20	*	Rainey C	3160	60	Tva2		sse	36		xs			pl?	161			
13 06E	31G21	*	Rainey C	2960	310	Tva2		sse	36		xs				165			
13 06E	31G22	*	Rainey C	3240	100	Tva2		sse	36		xs			pl?	12			
13 06E	31G23	*	Rainey C	2800	100	Tva2		sse	36		xs				165			
13 06E	31H20	*	Rainey C	3000	205	Tva2		sse	36		xs				165			
13 06E	31J20	*	Rainey C	3000	25	Tva2		sse	36		ss				165			
13 06E	31J21	*	Rainey C	3000	20	Tva2		sse	36		ss				165			
13 06E	32B1	*	Rainey C	3900	100	Tva2		e			xs				185			
13 06E	32D1	*	Rainey C	3640	215	Tva2		se			xs			pl	32	39		
13 06E	32D20	*	Rainey C	3520	280	Tva2		se							39			
13 06E	32G1	*	Rainey C	3400	110	Tva2		se			ds				14	12		
13 06E	32G20	*	Stiltner C	3320	90	Tva2		se			ds				14			
13 06E	32K1	*	Rainey C	3000	85	Tva2		se			ds				13	14		
13 06E	32P20	*	Rainey C	2800	75	Tva2		se			xs				12			
13 06E	32Q1	*	Rainey C	2800	130	Tva2		se			ds				13	15		
13 06E	32R1	*	Rainey C	2360	140	Tva2		se			ds				15			
13 06E	32R20	*	Stiltner C	2760	250	Tva2		se			xs				13			
13 06E	32R21	*	Stiltner C	3333	60	Tva2		se			xs				15			
13 06E	32R22	*	Stiltner C	2600	45	Tva2		se			xs				15			
13 06E	33A1		Kiona C	2660	100	Tva2					xs			pl?	25			
13 06E	33E20		Kiona C	2500	240	Tva2					xs			pl?	15			
13 06E	33F1	*	Kiona C	2600	210	Tva2					ds	fa?			24	12		
13 06E	33F2	*	Kiona C	2500	220	Tva2					ds	fa?			24			
13 06E	33F20	*	Kiona C	2040	250	Tva2					ds	fa?			15			
13 06E	33F21	*	Kiona C	2000	255	Tva2					ds	fa?			15			
13 06E	33F22	*	Kiona C	1960	265	Tva2					ds	fa?			15			
13 06E	33F23	*	Kiona C	2000	260	Tva2					ds	fa?			15			
13 06E	33F24	*	Kiona C	1920	230	Tva2					ds	fa?			15			
13 06E	33F3	*	Kiona C	2700	210	Tva2					ds	fa?			14	12		
13 06E	33K1		Kiona C	2600	155	Tva2					xs			pl?	12		14	
14 05E	31B20		Tilton R	2700	170	Tpg					xs	fa?			231			
14 05E	31C1		Tilton R	3360	155	Tva0	Tpg	w			xs			pl	231			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAh	dsr	sc	fl	hm	pr	ex		3	1	660				
VBq3	da	sc	fl				ch sh (ex)	2	1	70		1465		
VIs5	sr-ef	sc	fl	hm			l	4	1	200	730			
VIs5	sr-ef	sc	fl	hm	pr		dp l	4	1	600				
IIIBk-VII	ds-sc	sc	fl			ex	ch sed	2	2	110				
VIs5	sr-ef	sc	fl				dp	4	3					
VIs5	sr-ef	sc	fl	hm			l on gft	4	1	1870	650			
IIIBk-VII	ds-cb	sc	fl			ex		1	1	75				
IIIAg	rxsr	sc	fl	hm			gft l SU?	3	1					
IIIAh	dsr	sc	fl				SU	3	2					
IIIAg	rxsr	sc	fl	hm			dp	4	1					
IIIBk	ds	sc	fl			ex	SU	1	1	45				
VIs5	sr-ef	sc	fl	hm				4	2					
IIIAg	rxsr	sc	fl				SU	3	3					
IIIAg	rxsr	sc	fl				SU	3	3					
Ia-IId2	rf-rt	sc				ex	t c	1	1	50				
VIs5	sr-ef	sc	fl	hm				4	1	1800	1000			
IIIBk-VII	ds-cb	sc	fl			ex		1	1	60				
IIIAg	rxsr	sc		hm				4	4	740				
VBq3-VII	da-cb	sc	fl			ex	dp	1	1	35				
IIIAg	rxsr	sc	fl					4	3	630				
VBq3	da	sc	fl			ex	ch	2	1	25				
VIs5	sr-ef	sc	fl	hm			l on	4	1	850	630			
Vbqt	dt	sc	fl				on ch dp sh(ex)	2	1	75		40	4370	
VBq3	da	sc	fl			ex	ch	2	1	50				
VBq3	da	sc	fl			ex	ch	2	1	50				
VBq3	da	sc	fl			ex	ch	2	1	50				
VIs5	sr-ef	sc	fl	hm	pr		dp	4	2	800				
IIIAg	rxsr	sc	fl				SU	4	4	150				
VIs5	sr-ef	sc	fl	hm	pr			4	2	500	830			
IIIAg	rxsr	sc	fl		pr			4	2	350				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	25				
VBq3	da	sc	fl			ex		2	1	30				
VBq3	da	sc	fl			ex		2	1	40				
VBq3	da	sc	fl			ex		2	1	30				
IIIAg	rxsr	sc	fl	hm	pr			4	1	1050				
VIs5	sr-ef	sc		hm?	pr			4	3	1550				
IIIAg	rxsr	sc	fl				on l	4	2					
VIs5	sr-ef	sc	fl	hm			on	4	2	2390				

b

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
660	342120	70	23948417	34	32				15		5	SW88 19 98 30-31
50	2749	4	10996	30	28				70	trb2	5	SW88 19 98 30-31
450	70686	65	4594590	26	28				4	EF Tilton R	4	SW88 19 98 30-31
400	188496	85	16022160	22	24				4		x	SW88 19 98 228-229
60	5184	10	51836	28					5		5	SW88 19 98 228-229
	0	40	0						5			SW88 19 98 228-229
1120	1644942	100	164494176	22	22				70		4	SW88 18 97 260
60	3534	3	10603						70			SW88 18 97 260
	0	60	0						4			SW88 18 97 256-258
	0	45	0						70			SW88 18 97 256-258
	0	35	0						4			SW88 18 97 256-258
50	1767	4	7069						70			SW88 18 97 256-258
	0	65	0						4			SW88 18 97 256-258
	0	12	0						70			SW88 18 97 256-258
	0	13	0						70			SW88 18 97 256-258
530	20813	10	208131	32	32				45		5	SW88 19 98 25-26
2000	2827440	60	169646400	22	35				35	Rainey C	4	SW88 19 98 25-26
40	1885	5	9425						4			SW88 19 98 25-26
1480	860170	30	25805102	34	37				45		4	SW88 19 98 25-26
20	550	3	1649						1			SW88 19 98 25-26
950	470062	80	37604952	37	30				8		5	SW88 19 98 25-26
25	491	4	1964						2			SW88 19 98 25-26
1160	774404	85	65824374	30	41				8		5	SW88 19 98 25-26
40	2356	6	14137	33					8		5	SW-C-78 49B-33
45	1767	4	7069						8			SW88 19 98 25-26
45	1767	4	7069						50			SW88 19 98 25-26
45	1767	4	7069						50			SW88 19 98 25-26
350	219912	80	17592960	28					7	Kiona C	4	SW88 19 99 60-61
150	17672	30	530145						7			SW88 19 99 60-61
515	202241	60	12134430	22					7	tb1,Kiona R	4	SW88 19 99 60-61
520	142943	45	6432426	31					7	tb1,Kiona R	5	SW88 19 99 60-61
30	707	4	2827						7			SW88 19 99 60-61
30	589	4	2356						7			SW88 19 99 60-61
30	707	3	2121						7			SW88 19 99 60-61
30	942	3	2827						7			SW88 19 99 60-61
40	942	3	2827						7			SW88 19 99 60-61
930	766943	80	61355448	20	19				7	tb1,Kiona R	5	SW88 19 99 60-61
830	1010417	100	101041710	31	28				7	tb1,Kiona R	5	SW88 19 99 60-61
	0	80	0						14			SW88 25 91 37-38
1280	2402696	110	264296525	31	31				10		5	SW88 25 91 40

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	31D1		Tilton R	3540	140	Tpg					xs	fa			179			
14 05E	31E1		Tilton R	3100	65	Qls	Tva0	sw		22	xs				250	251		
14 05E	31G1		Tilton R	2640	50	Qls	Tpg				ss	fa			251			
14 05E	31G2		Tilton R	2500	165	Tpg					ds	fa			231			
14 05E	31G3		Tilton R	2300	160	Qls	Tpg				ds	fa			231			
14 05E	31H1		Tilton R	2500	165	Tpg					ds				251			
14 05E	31H20		Tilton R	2360	200	Tpg					ds	fa			231			
14 05E	31L1		Tilton R	3100	105	Qls	Tpg				xs	fa		pl	250	251		
14 05E	31R1		Tilton R	2260	130	Qls					xs				250	232		
14 05E	32C1		Tilton R	1800	105	Tpg					ss				160			
14 05E	32D1		Tilton R	2600	150	Tpg						fa			160		257	
14 05E	32L1		Tilton R	2280	155	Qdht		nw			xs	fa	f		232	231		
14 05E	32M1		Tilton R	2260	185	Tpg	Qls	nnw			xs	fa	f		232	231		
14 05E	33D20	*	Tilton R	2080	295	Tpg						fa			89			
14 05E	33F1	*	Tilton R	2100	300	Tpg		ssw				fa	f		163			
14 05E	33M1	*	Tilton R	2000	270	Tpg						fa			49			
14 05E	34B1		Washington C	3400	85	Tva		se			xs				216			
14 05E	34F1		Roundtop C	3800	330	Qls	Tva	se			xs		f	pl	219	217	31	215
14 05E	34L1		Roundtop C	3900	315	Qls	Tva	se			xs				219	217		
14 05E	34P1		Roundtop C	4300	50	Tva		se			xs				186	185		
14 05E	34Q1		Roundtop C	4200	270	Tva		se			xs				219	220		
14 05E	34Q2		Roundtop C	4600	5	Tva		se			xs				215	185		
14 05E	34R1		Washington C	3180	330	Tva		se			xs				33			
14 05E	35C1		Washington C	3300	260	Tva		ese	63		xs				32			
14 05E	35F1		Washington C	3700	345	Tva		ese			xs				38	219		
14 05E	35F20		Washington C	3200	290	Tva		se							32			
14 05E	35H1		Gallup C	3630	155	Tva		ese			ds				32			
14 05E	35L1		Washington C	4000	345	Tva		ese	53		ss				185	219		
14 05E	35M1		Washington C	3240	270	Tva		se							78			
14 05E	35N1		Washington C	4120	340	Tva		ese			xs				185	219		
14 05E	35N2		Washington C	4000	330	Tva		se							215			
14 05E	35N20		Washington C	3800	10	Tva		se							185			
14 05E	35N3		Washington C	3200	320	Tva		se							219			
14 05E	35N4		Washington C	3500	345	Tva		se							78			
14 05E	35R1		Gallup C	3700	130	Tva		ese			ds				216	215		
14 05E	35R20		Gallup C	3360	100	Tva		se							215			
14 05E	36A20	*	Gallup C	2120	260	Tva		ese			ss				161			
14 05E	36A21	*	Gallup C	2200	270	Tva		ese			ss				161			
14 05E	36B1	*	Gallup C	2600	90	Tva		se			xs				12			
14 05E	36H1		Gallup C	2200	330	Tva		se			ss				161			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
VIs5	sr-ef	sc	fl	hm	pr			4	2	820	1230			
VIs5	sr-ef	sc	fl	hm	pr		dp	4	2	771				
IIIAg	rxsr	sc	fl		pr			3	2	715				
IIIBk	ds	sc	fl	hm			dp SU? (ex)	2	3	410				
IIIBk	ds	sc	fl			ex	SU	2	1	45				
IIIBk	ds	sc	fl	hm			dp SU? (ex)	3	1	250				
VBq3	da	sc	fl			ex		2	1	40				
VIs5	sr-ef	sc	fl	hm			l	4	1	2260	3590			
IIIBk	ds	sc	fl				(ex)	2	2	90				
IIIBk	ds	sc						3	4	120				
VIs5	sr-ef	sc	fl	hm			SU?	4	3					
VIs5	sr-ef	sc	fl	hm				4	3	1285				
VIs5	sr-ef	sc	fl	hm				4	3	1210				
VBqt	dt	sc	fl				(ex) ch BIC	2	1	70				
VIs5	sr-ef	sc	fl	hm	pr		l (ex) on	4	2	1000				
VIs5	sr-ef	sc	fl	hm	pr		l (ex) on	4	3	500	555			
IIIBk-VII	ds-sc	sc	fl			ex		2	2	75	110			
VIs5	sr-ef	sc	fl	hm	pr		l	4	2	100	4030			
VIs5	sr-ef	sc	fl	hm			l on	4	1	1105	1180			
VBq3	da	sc	fl			ex	dp	2	1	80	275			
Ia-IId1	rf-rt	sc					c 1 t	3	1	100	160			
VBq3	da	sc	fl			ex	dp ch	2	1	140	310			
VBq3	da	sc	fl				(ex) dp sh	2	1	35	215			
VBq3	da	sc	fl				bg	3	4	350				
VIs5	sr-ef	sc	fl	hm	pr		l (ex)	4	2	1800				
VBqt	dt	sc	fl				ch sh BIC	2	1	70				
VIs5	sr-ef	sc	fl	hm?	pr		h	4	3	580	900			
Ia-IId1	rf-rt	sc					t c	3	1	200				
VBq3	da	sc	fl				(ex) sed	3	3	40				
Ia-IId1	rf-rt	sc					t c	3	1	150	1265			
IIIBk-VII	ds-ld	sc	fl			ex	dp	2	2	45				
VBq3	da	sc	fl			ex	ch	2	1	30				
VBq3-VII	da-sc	sc	fl			ex	dp	2	2	45				
VBq3	da	sc	fl			ex	ch (ex)	2	2	30				
VIs5	sr-ef	sc	fl	hm	pr		rej gft l (ex)	4	1	910	2165			
VBq3	da	sc	fl			ex	c dp	2	1	60				
IIIBk	ds	sc	fl			ex	SU	1	1	120				
IIIAg	rxsr	sc	fl				SU	3	3					
IIIAg	rxsr	sc	fl		pr		SU on	3	2	920				
VBq3	da	sc	fl				bg	4	4	150				

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
925	595726	110	65529849	39	33				10	Tilton R	4	SW88 25 91 37-38
670	405714	80	32457126	32	32				14	Tilton R	4	SW88 25 91 37-38
560	314474	60	18868450	32	39				14	Tilton R	4	SW88 25 91 37-38
90	28981	15	434719	28	21				10	Tilton R	4	SW88 25 91 37-38
50	1767	4	7069	39					22	Tilton R	4	SW88 25 91 37-38
200	39270	15	589050	28	15				10	Tilton R	4	SW88 25 91 37-38
60	1885	4	7540						10			SW88 25 91 37-38
870	1544253	14	21619549	23	45				14	Tilton R		SW88 25 91 37-38
70	4948	4	19792						14			SW88 25 91 37-38
120	11310	5	56549						50	trb1		SW88 25 92 2
500	0	100	0						10	trb1		SW-C-78 46B-42
805	812437	60	48746244						70			SW88 25 92 2
1450	1377984	90	124018587						70			SW88 25 92 2
70	3848	5	19242						18			SW88 25 92 2
800	628320	90	56548800			18			18			SW88 25 92 2
400	157080	40	6283200						18			SW88 25 92 2
245	14432	4	57727						15			SW88 25 94 56
1152	90478	85	7690637						6	Roundtop C		SW88 25 94 56
1775	1540464	100	154046393						9	trb1		SW88 25 94 54
65	4084	4	16336						99			SW88 25 94 54
600	47124	4	188496						9	trb1		SW88 25 94 54
100	10996	3	32987						9			SW88 25 94 54
40	1100	4	4398			55			14			SW88 25 94 54
90	24740	4	98960						20	trb1		SW88 25 95 71
950	1343034	110	147733740						14	trb1		SW88 25 95 71
50	2749	5	13745						20			SW88 25 95 71
370	168547	65	10955545						18	trb1		SW88 25 95 71
1035	162578	4	650311						14	Washington C		SW88 25 95 71
40	1257	4	5027						14			SW88 25 95 71
800	94248	4	376992						14	Washington C		SW88 25 95 71
75	2651	4	10603						20			SW88 25 95 71
10	236	4	942						14			SW88 25 95 71
60	2121	4	8482						14			SW88 25 95 71
60	1414	4	5655						14			SW88 25 95 71
1450	1036335	110	113996883						18	Gallup C		SW88 25 95 71
35	1649	4	6597						18			SW88 25 95 71
30	2827	3	8482						30			SW88 25 95 89
	0	75	0						20			SW88 25 95 89
1100	794825	90	71534232						40			SW88 25 95 89
250	29453	20	589050						30			SW88 25 95 89

c

APPENDIX II. FOCUS STUDY AREA LANDSLIDE INVENTORY

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	36K1	*	Gallup C	2500	105	Tva		ese			ds				12	161		
14 05E	36K20	*	Gallup C	2180	130	Tva		ese			ds				161			
14 05E	36K21	*	Gallup C	2300	100	Tva		ese			xs				161			
14 05E	36N1	*	Gallup C	2700	100	Tva		se			ds				164			
14 05E	36N20	*	Gallup C	2200	140	Tva		ese			xs				161			
14 05E	36Q1		Gallup C	2600	325	Tva		se			ss				161			
14 05E	36R1		Gallup C	2900	335	Tva		se			ss				161			
14 05E	36R20		Gallup C	2880	340	Tva		ese			ss				161			
14 06E	31A1		Mineral C	3280	210	Tva		se			xs				24			
14 06E	31B20		Mineral C	2800	290	Tva		se			xs				160	24		
14 06E	31B21		Mineral C	2640	290	Tva		se			xs				160			
14 06E	31B22		Mineral C	2640	240	Tva		se			xs				160			
14 06E	31E1	*	Mineral C	2280	95	Qdht		se	25	36	xs				15			
14 06E	31F1		Mineral C	2760	345	Qdht		ese			ss				13	12		
14 06E	31F2	*	Mineral C	2100	60	Qdht		se			xs				12			
14 06E	31J1		Mineral C	2760	285	Tva		se			xs				24			
14 06E	31M20		Mineral C	3080	55	Tva		se			xs			pl?	161			
14 06E	31R20		Mineral C	2360	140	Tva		se			ds				161			
14 06E	31R21		Mineral C	2440	160	Tva		se			ds				161			
14 06E	32P20		Mineral C	3160	270	Tva		se			xs				161			
14 06E	32Q1	*	Mineral C	3200	320	Tva	Toh	se			xs				184	39		

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GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS				
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS				
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2	La3
IIIAg	rxsr	sc	fl				on	3	3	250				
VBq3	da	sc	fl				SU (ex) ch	2	1	60				
IIIBk-VII	ds-rd	sc	fl			ex	SU	1	2	18				
VIs5	sr-ef	sc	fl				on h	4	3	462				
IIIBk-VII	ds-rd	sc	fl			ex	SU	1	1	19				
VBqt	dt	sc	fl				(ex) ch	2	1	75		30	640	
IIIAg	rxsr	sc	fl					4	4	150		30	1920	
VBqt	dt	sc	fl			ex	ch BIC dp af	2	2	40				
VIs5	sr-ef	sc	fl	hm			gft pd	4	2					
VIs5	sr-ef	sc	fl	hm			on	3	2					
VBq3-VII	da-sc	sc	fl			ex		2	1	50				
VBq3-VII	dt-sc	sc	fl				(ex) ch	2	1	50				
VBq3	da	sc	fl			ex	SU ch	2	1	90				
IIIÀh	dsr	sc	fl				bg SU?	4	3	650				
IIIBk	ds	sc	fl				SU bg	3	3	90				
VIs5	sr-ef	sc	fl	hm			SU sh	4	2	850				
VIs5	sr-ef	sc	fl	hm			dp SU?	4	2					
IIIBk	ds	sc	fl			ex	SU	2	1	150				
IIIBk	ds	sc	fl				(ex) ch	3	1	110				
VBqt	dt	sc	fl				ch	3	2	75				
VIs5	sr-ef	sc	fl	hm			rej i (ex) BIC	2	1	915	1470			

DIMENSIONS				SLOPE					FOREST PRACTICES			AERIAL PHOTO NUMBER
AERIAL DIMENSION		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS		
Width	Area	(ft)	(cubic feet)			sc	fl	ot	cc	(GENERAL		
(ft)	(square feet)			1	2	1	2	3	age	NOTES)	#	
250	49088	70	3436125						30			SW88 25 95 89
45	2121	4	8482						30			SW88 25 95 89
80	1131	6	6786						30			SW88 25 95 89
493	178887	70	12522119						40		2	SW88 18 96 231
53	791	10	7909						30			SW88 25 95 89
25	1473	5	7363						30			SW88 25 95 89
150	17672	30	530145						30			SW88 25 95 89
40	1257	6	7540						20			SW88 25 95 89
	0	140	0						17			SW88 25 97 106
	0	90	0						20			SW88 25 97 106
75	2945	4	11781						20			SW88 25 97 106
80	3142	4	12566						20			SW88 25 97 106
45	3181	3	9543						10	Mineral C		SW88 25 97 106
350	178679	85	15187673						14			SW88 25 97 106
400	28274	4	113098						10	Mineral C		SW88 25 97 106
900	600831	90	54074790						20			SW88 25 97 106
	0	85	0						5			SW88 25 97 106
45	5301	4	21206						40			SW88 25 97 106
40	3456	4	13823						15			SW88 25 97 106
80	4712	5	23562						5			SW88 25 97 106
715	513828	4	2055313						70	trb1		SW-C-78 49B-37

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APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 06E	02B1		Kiona C	3800	210	Tva2		sw	35	40	ds				219	32		
12 06E	02F1		Kiona C	3300	75	Tva2		sw	35	40	ss				181			
12 06E	02G1		Kiona C	3200	245	Tva2		sw	35	40	ds				32			
12 06E	02G2		Kiona C	2800	220	Tva2		sw	35	40	ds				165			
12 06E	02G20		Kiona C	3040	215	Tva2		sw	35	40	ds				32			
12 06E	02G21		Kiona C	3080	220	Tva2		sw	35	40	ds				31			
12 06E	02G3		Kiona C	3000	240	Tva2		sw	35	40	ds				165			
12 06E	02H1		Kiona C	3480	240	Tva2		sw	35	40	ds				32	186	31	
12 06E	02K1		Kiona C	2300	270	Tva2		sw	35	40	ds				184			
12 06E	02M1		Kiona C	2200	270	Tva2		sw	35	40	xs				165			
12 06E	02M2		Kiona C	2400	255	Tva2		sw	35	40	xs				144			
12 06E	02N20		Kiona C	2440	250	Tva2		sw	35	40	ds				144			
12 06E	03B1		Kiona C	3160	265	Tva2		sw	40		ds				32			
12 06E	03D1		Kiona C	2300	270	Tva2		sw	40		xs				12			
12 06E	03D2		Kiona C	2200	340	Tva2		sw	40		xs				12			
12 06E	03D20		Kiona C	1920	280	Tva2		sw	40		xs				12			
12 06E	03D3		Kiona C	2100	280	Tva2		sw	40		xs				144			
12 06E	03E1		Kiona C	1700	290	Tva2		sw	40		xs				144			
12 06E	03E2		Kiona C	1700	235	Tva2		sw	40		ds				144			
12 06E	03E3		Kiona C	1800	235	Tva2		sw	40		ds				144			
12 06E	03E4		Kiona C	2000	235	Tva2		sw	40		ds				144			
12 06E	03E5		Kiona C	2000	235	Tva2		sw	40		ds				144			
12 06E	03G20		Kiona C	2900	220	Tva2		sw	40		ds				15			
12 06E	03H1		Kiona C	2800	200	Tir		sw	40		ds				15			
12 06E	03H20		Kiona C	2880	195	Tva2		sw	40		ds				15			
12 06E	03H21		Kiona C	3120	195	Tva2		sw	40		ds				15			
12 06E	03H22		Kiona C	3400	205	Tva2		sw	40		ds				15			
12 06E	03H23		Kiona C	3200	210	Tva2		sw	40		ds				15			
12 06E	03H24		Kiona C	3680	195	Tva2		sw	40		ds				39	15		
12 06E	03L1		Kiona C	1960	245	Tir		sw	40		ds				144			
12 06E	03L2		Kiona C	1960	245	Tir		sw	40		ds				144			
12 06E	03L3		Kiona C	1960	240	Tir		sw	40		ds				144			
12 06E	03L20		Kiona C	1960	180	Tir		sw	40		ds				144			
12 06E	03L21		Kiona C	1920	265	Tir		sw	40		ds				144			
12 06E	03L22		Kiona C	1760	160	Tir		sw	40		ds				144			
12 06E	03L23		Kiona C	2500	245	Tir		sw	40		ds				144			
12 06E	03L24		Kiona C	2500	260	Tir		sw	40		ds				144			
12 06E	03L25		Kiona C	1840	240	Tir		sw	40		ds				143			
12 06E	03L26		Kiona C	1460	140	Tir		sw	40		xs				143			
12 06E	03L27		Kiona C	1700	255	Tir		sw	40		ds				144			
12 06E	03M1		Kiona C	2200	220	Tir		sw	40		ds				144			
12 06E	03M2		Kiona C	2200	230	Tir		sw	40		ds				143			
12 06E	03M3		Kiona C	2000	245	Tir		sw	40		ds				143			
12 06E	03Q1		Kiona C	1800	175	Tir		sw	40		ds				181			
12 06E	03Q20		Kiona C	1960	185	Tir		sw	40		ds				181			

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GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VIs5	sr-ef	sc		hm				4	3	880			
Ia-IId1	rf-rt	sc			pr	ex	(ex) t	1	1	70			
IIIAg	rxsr	sc	fl	hm			SU (ex)	3	2	780			
IIIAg	rxsr	sc	fl			ex	on	3	2	800			
VBqt	dt	sc	fl				ch BIC	2	1	30			
VBq3	da	sc	fl				ch BIC	2	1	40			
VBqt	dt	sc	fl			ex	ch sed BIC	2	1	100			
VIs5	sr-ef	sc	fl		pr		I on hd SU	4	2	2460			
IIIAg	rxsr	sc	fl				(ex) SU	2	2	640			
VBqt	dt	sc	fl			ex	SU	2	1	195			
Ia-IId1	rf-rt	sc				ex	c t	2	1	60			
VBq3	da	sc	fl				ch BIC	2	1	90			
VIs5	sr-ef	sc	fl	hm	pr		gft	2	1	750			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	60			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl	hm		ex	ch dp	2	1	60			
VBqt	dt	sc	fl			ex	ch dp	2	1	60			
VBqt	dt	sc	fl			ex	ch dp	2	1	60			
VBqt	dt	sc	fl			ex	ch dp	2	1	60			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VIs5	sr-ef	sc	fl	hm?		ex	on	2	1	200	600		
VBqt	dt	sc	fl			ex	ch dp	2	1	100			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
VBq3	da	sc	fl			ex		2	1	60			
IIIBk-VII	ds-sc	sc	fl					2	1	100			
VIs5	sr-ef	sc	fl	hm			on	4	3	1440			
VIs5	sr-ef	sc	fl	hm			on	3	2				
VIs5	sr-ef	sc	fl	hm			on	3	2				
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	70			
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	70			
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	100			
VBq3	da	sc	fl			ex	ch dp	2	1	60			
VBq3	da	sc	fl			ex	ch dp	2	1	60			
VBq3	da	sc	fl			ex	ch dp	2	1	60			
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	80			
Vbqt	dt	sc	fl			ex	ch dp	2	1	80	1000		
Vbqt	dt	sc				ex		2	1	80			
VBqt	dt	sc	fl			ex	ch dp	2	1	40			
VIs5	sr-ef	sc	fl	hm?			on I	3	1	900			
VBq3	da	sc	fl			ex	ch dp	2	1	80			

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH (ft)	VOLUME (cubic feet)	OFFICE		FIELD				EFFECTS (GENERAL NOTES)	
Width (ft)	Area (feet squared)					sc	fl	ot	cc age		#
				1	2	1	2	3			
490	338664	60	20319869						17		
900	49480	4	197921						17		
680	416576	60	24994570						60		
390	245045	40	9801792						60	Min C,trb	
120	2827	4	11310						17		
40	1257	4	5027						17		
100	7854	4	31416						60	Min C,trb	
1830	3535714	120	424285646						60		
200	100531	4	402125						60		
100	15315	4	61261						60		
1000	47124	4	188496						60		
120	8482	4	33929						60		
120	70686	50	3534300						17		5
900	56549	4	226195	39					7	Kiona C	5
		4		39					7	Kiona C	5
40	1885	4	7540						7		
60	3770	4	15080	40					7	Kiona C	5
40	2513	4	10053	39					7	Kiona C	4
40	1885	4	7540	39					7	Kiona C	2
40	1885	4	7540	39					7	Kiona C	2
40	1885	4	7540	40					7	Kiona C	2
40	1885	4	7540	39					7	Kiona C	2
40	2513	4	10053						7		
200	31416	40	1256640	45	34				7		5
120	9425	4	37699						7		
80	5027	4	20106						7		
80	3770	4	15080						7		
120	9425	4	37699						7		
780	882161	100	88216128						7		
									7		
									7		
140	7697	4	30788						7		
140	7697	4	30788						7		
100	6283	4	25133						7		
100	7854	4	31416						7		
40	1885	4	7540						7		
40	1885	4	7540						7		
40	1885	4	7540						7		
60	3770	4	15080						7		
60	3770	4	15080						7		
40	2513	4	10053	22	38				7	Kiona C,hr,st	4
40	2513	4	10053	30	34				7	Kiona C	4
40	1257	4	5027	37					7	Kiona C	4
1290	911849	70	63829458	39	45				7		
80	5027	4	20106						7		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
12 06E	03Q21		Kiona C	1820	190	Tir		sw	40		ds				144			
12 06E	03R1		Kiona C	1800	190	Tvb3		sw	40		ds				144			
12 06E	03R21		Kiona C	1760	195	Tva2		sw	40		ds				144			
12 06E	10G20		Kiona C	1800	165	Tva2		ssw			xs				144	143		
12 06E	10P20		Kiona C	1640	25	Tvb3		ssw			ss				2			
12 06E	11A1		Kiona C	2800	240	Tva2		sw	35		xs				184			
12 06E	11B1		Kiona C	2600	220	Tva2		sw	35	40	ds				184			
12 06E	11B20		Kiona C	2320	185	Tva2		sw	35	40	ds				184			
12 06E	11F1		Kiona C	1700	0	Tva2		sw	35	40	ss				143		196	
12 06E	15H1		Kiona C	1400	90	Tvb3		sw			xs			pl	59	58		
13 06E	02N1		NF Mineral C	3460	80	Toh		ese	18		xs				32	31		
13 06E	03G20		Mineral C	3440	355	Toh		se			xs				32			
13 06E	03N20		Mineral C	3320	150	Toh		s			ds				33			
13 06E	03N21		Mineral C	3280	335	Tva2		s			ss				33			
13 06E	03P20		Mineral C	3800	240	Toh		se			xs				181			
13 06E	03P21		Mineral C	3800	215	Toh		se			xs				181			
13 06E	03P22		Mineral C	3760	245	Toh		se			xs	fa			181			
13 06E	03P23		Mineral C	3680	230	Toh		se			xs	fa			181			
13 06E	03P24		Mineral C	3640	120	Toh		se			ds	fa			31			
13 06E	03R20		NF Mineral C	2300	140	toh		se			ds				31	32		
13 06E	04C20		NF Mineral C	4160	25	Toh		sse			ss				40			
13 06E	04M1		Mineral C	3100	180	Toh		sse			ds				32	40		
13 06E	04M20		Mineral C	3000	180	Toh		sse			xs				40			
13 06E	04M21		Mineral C	3040	165	Toh		sse			ds				40			
13 06E	04Q1		Mineral C	3200	215	Toh		sse			ds	fa			32			
13 06E	09B20		Mineral C	2800	190	Toh		sse			ds				39			
13 06E	09B21		Mineral C	2860	150	Toh		sse			ds				39			
13 06E	09E1		Mineral C	2800	75	Toh		sse			xs			pl	14			
13 06E	10B1		Mineral C	3500	250	Toh		s			xs	fa		pl	181			
13 06E	10B2		Mineral C	3500	250	Toh		s			xs	fa		pl	33			
13 06E	10B20		Mineral C	3440	210	Toh		s			ds	fa			181			
13 06E	10B21		Mineral C	3640	295	Toh		s			ds	fa			181			
13 06E	10B22		Mineral C	3600	270	Toh		s			ds	fa			181			
13 06E	10B23		Mineral C	3600	255	Toh		s			ds	fa			181			
13 06E	10C1		Mineral C	3800	170	Toh		s			ds	fa			32			
13 06E	10C2		Mineral C	3600	180	Toh		s			ds	fa			32			
13 06E	10C3		Mineral C	3600	270	Toh		se			ds	fa			32			
13 06E	10C4		Mineral C	3600	170	Toh		se			ds	fa			32			
13 06E	10D2		Mineral C	3300	135	Toh		s			ds				33			
13 06E	10D20		Mineral C	3300	95	Toh		s			xs	fa			33			
13 06E	10D21		Mineral C	3060	95	Toh		s			xs	fa			32			
13 06E	10G1		Mineral C	3300	270	Toh		s			xs				32			
13 06E	10G2		Mineral C	3200	270	Toh		s			xs				32			
13 06E	10G20		Mineral C	3120	260	Toh		s			ds	fa			40			
13 06E	10G21		Mineral C	3120	260	Toh		s			ds	fa			40			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBqt-VII	dt-sc	sc	fl			ex	ch dp	3	1	100			
VIs5	sr-ef	sc	fl	hm			gft	3	1	200			
IIIBk-VII	ds-sc	sc	fl			ex	ch dp	2	1	90			
Ia-IId1	rf-rt	sc				ex	t	1	1	200			
IIIAg	rxsr	sc	fl				SU?	4	2	480			
IIIAg	rxsr	sc	fl	hm?			r i	3	3	560			
IIIAg	rxsr	sc	fl				i	3	2	900			
VBq3	da	sc	fl			ex	ch	2	1	50			
Ia-IId1	rf-rt	sc					t	3	1	60			
VIs5	sr-ef	sc	fl	hm?				4	3	1000			
VBqt	dt	sc	fl	hm		ex	dp	2	1	205			
VBqt	dt	sc	fl				sed	3	1	100			
VBqt	dt	sc	fl				sed (ex)	2	1	100			
VBqt	dt	sc	fl				sed (ex)	2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VIs5	sr-ef	sc	fl	hm			I	4	2	2910			
VBqt	dt	sc	fl			ex	cd (ex) BIC	3	1	90			
VIs5	sr-ef	sc	fl	hm	pr	ex	i SU?	3	1	1000			
VBqt-VII	dt-sc	sc	fl			ex	ch	2	1	70			
VBqt-VII	dt-sc	sc	fl			ex	ch	2	1	80			
VIs5	sr-ef	sc	fl		pr		SU?	3	2	1200			
IIIBk	ds	sc	fl			ex	SU?	2	1	60			
IIIBk	ds	sc	fl			ex	SU?	2	1	60			
VIs5	sr-ef	sc	fl	hm			SU? hd	3	1	240			
VIs5	sr-ef	sc	fl	hm	pr		SU?	3	1	500	250		
IIIAg	rxsr	sc	fl	hm	pr		SU	3	1	760			
VBq3	da	sc	fl			ex		2	1	50			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VIs5	sr-ef	sc	fl	hm	pr?		(ex)	4	1	1400			
VBq3	da	sc				ex		2	1	50			
IIIBk	ds	sc	fl	hm		ex		2	1	50			
IIIBk	ds	sc	fl			ex		2	1	120			
VIs5	sr-ef	sc	fl	hm?			gft	4	2	710			
VBq3	da	sc	fl			ex		2	1	60			
VBq3	da	sc	fl			ex		2	1	60			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex	(ex)	2	1	180			
VBq3	da	sc	fl			ex		2	1	120			

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
120	9425	4	37699						7		
200	31416	50	1570800	58					7		
180	12723	4	50894						7		
1440	226195	4	904781						25		
930	350603	60	21036154						25		
675	296881	50	14844060						12		
560	395842	60	23750496						12		
30	1178	4	4712						12		
1700	80111	4	320443						12		
1000	785400	80	62832000	22	8				12		5
215	34617	4	138466	15					25		5
60	4712	4	18850						25		
60	4712	4	18850						18		
60	3770	4	15080						18		
60	3770	4	15080						20		
60	3770	4	15080						20		
60	3770	4	15080						20		
60	3770	4	15080						20		
60	3770	4	15080						20		
2400	5485234	90	493671024						19		
90	6362	4	25447						70		
775	608685	70	42607950	25	27				15		4
120	6597	4	26389						15		
80	5027	4	20106						15		
500	471240	60	28274400	39	22				4		5
150	7069	4	28274						24		
150	7069	4	28274						24		
540	101788	60	6107270						24		5
500	196350	60	11781000	45	31				20	Min C,trb	5
500	298452	60	17907120	38	27				20	Min C,trb	5
120	4712	4	18850						20		
70	4398	4	17593						20		
70	4398	4	17593						20		
70	4398	4	17593						20		
2110	2320072	90	208806444	45					6	Min C,trb	5
120	4712	4	18850	28					6	Min C,trb	5
120	4712	4	18850	30					6	Min C,trb	5
50	4712	4	18850	30					6	Min C,trb	5
1200	669161	90	60224472	30	28				6	Min C,trb	5
60	2827	4	11310						6		
60	2827	4	11310						16		
100	6283	4	25133	35					20	Min C,trb	4
200	12566	4	50266	35					20	Min C,trb	4
200	28274	4	113098						20		
100	9425	4	37699						20		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	10G3		Mineral C	3200	270	Toh		s			xs				32			
13 06E	10G4		Mineral C	3200	270	Toh		s			xs				32			
13 06E	11E20		NF Mineral C	3300	0	Toh		se	18		ds				32	31		
13 06E	11E21		NF Mineral C	3400	90	Toh		se	18		xs				31	32		
13 06E	11N20		NF Mineral C	3160	225	Toh		se	18		xs				32	31		
13 06E	15F20		Mineral C	3400	5	Toh		s			ds				72	39		
13 06E	15M1		Mineral C	3200	250	Tva2		s			ss				72			
13 06E	16G20		Mineral C	2960	90	Toh		se			xs			pl?	71			
13 06E	16G21		Mineral C	2960	40	Toh		se			xs			pl?	32			
13 06E	16G22		Mineral C	2920	35	Toh		se			xs			pl?	32			
13 06E	16J1		Mineral C	2900	270	Toh		s			xs			pl?	220			
13 06E	16J20		Mineral C	2900	350	Toh		se			ss				220			
13 06E	16K20		Mineral C	2880	130	Toh		se			xs			pl?	32			
13 06E	16K21		Mineral C	260	90	Toh		se			xs			pl?	32			
13 06E	16L1		Mineral C	3500	50	Toh		se			xs			pl?	32	39	17	
13 06E	16P2		Mineral C	3360	75	Toh		se			xs			pl?	32			
13 06E	16Q1		Mineral C	2960	315	Toh		se			ss			pl?	71			
13 06E	16Q20		Mineral C	2960	330	Toh		se			ss				71			
13 06E	16Q21		Mineral C	2960	40	Toh		se			xs				32			
13 06E	21B1		Mineral C	3800	95	Tva2		s			xs				71	76		
13 06E	21B20		Mineral C	3120	260	Tva2		s			xs				32			
13 06E	21E1		Mineral C	4400	40	Tva2		s			xs				40	39	31	39
13 06E	21G1		Mineral C	3800	65	Tva2		s			xs			pl	186			
13 06E	21G20	*	Mineral C	3360	260	Tva2		s			xs				32			
13 06E	21J1	*	Mineral C	3800	270	Tva2		s			xs			pl?	39			
13 06E	21N20		Mineral C	3820	125	Tva2		s			xs				186			
13 06E	22C20		Mineral C	3600	345	Qdh	Tva2	sw	30		ss				72	32		
13 06E	23E1		Mineral C	3700	90	Tid		sw	30		xs				220			
13 06E	23H1		Mineral C	3800	355	Tva2		sw	30		ss				220			
13 06E	23H2		Mineral C	3800	0	Tva2		sw	30		ss				220			
13 06E	23N1		Kiona C	4100	180	Tva2		sw	30		ds				32			
13 06E	23N2		Kiona C	4300	130	Tid		sw	30		ds				40			
13 06E	23N3		Kiona C	4300	40	Tid		sw	30		xs				40			
13 06E	23R1		Kiona C	3500	275	Tva2		sw	30		ds				32			
13 06E	23R20		Kiona C	3520	100	Tva2		sw	30		xs				71			
13 06E	23R21		Kiona C	3560	180	Tva2		sw	30		xs				71			
13 06E	23R22		Kiona C	3480	100	Tva2		sw	30		xs				31			
13 06E	26B1		Kiona C	3400	140	Tva2		ssw	24		xs				215			
13 06E	26E1		Kiona C	2800	160	Tva2		ssw	24		xs				32			
13 06E	26G1		Kiona C	3400	320	Tva2		ssw	24		xs				220			
13 06E	26K1		Kiona C	3300	350	Tva2		ssw	24		xs				220			
13 06E	26M1		Kiona C	2700	160	Tva2		ssw	24		xs				13			
13 06E	26M2		Kiona C			Tva2		ssw	24		xs				13			
13 06E	26P1		Kiona C	3400	285	Tva2		ssw	24		xs				32			
13 06E	26Q1		Kiona C	4100	265	Tva2		ssw	24		xs				33			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBq3	da	sc	fl			ex		2	1	80			
VBq3	da	sc	fl			ex		2	1	80			
IIIAg	rxsr	sc	fl		pr		SU I	4	2	2400			
VIs5	sr-ef	sc	fl	hm			I	4	2	2400			
VIs5	sr-ef	sc	fl	hm			I	4	3	2500			
VIs5	sr-ef	sc	fl			ex	ch dp	2	1	2430			
VBqt-VII	dt-sc	sc	fl	hm			s dp	4	2	120			
IIIAg	rxsr	sc	fl				on SU hd	3	2	990			
VBq3	da	sc	fl			ex		2	1	60			
VBq3	da	sc	fl			ex		2	1	60			
VBqt	dt	sc	fl			ex	dp i ch	2	1	830	1560		
VBq3	da	sc	fl			ex	ch sed SU	2	1	80			
VBq3	da	sc	fl			ex		2	1	60			
VBq3	da	sc	fl			ex		2	1	60			
VIs5	sr-ef	sc	fl	hm	pr		gft	4	1	1080	1270		
VBq3	da	sc	fl			ex		3	1	150			
VBqt	dt	sc	fl			ex	dp i	2	1	125			
VBqt-VII	dt-sc	sc	fl			ex	ch sed	2	1	90			
VBqt-VII	dt-sc	sc	fl			ex	ch sed	2	1	120			
VBq3	da	sc	fl				(ex) ch	2	2	80			
VBqt	dt	sc	fl			ex	sed SU?	2	1	90			
VIs5	sr-ef	sc	fl	hm			hd SU? pd	4	3	4000			
VBq3	da	sc	fl					4	4	450			
VBq3	da	sc	fl			ex	SU?	2	1	80			
VBq3	da	sc	fl	hm		ex	hd ft to dp	2	1	734	489	1180	
VBq3	da	sc	fl				ch	3	1	60			
VIs5	sr-ef	sc	fl	hm				4	2	3200	1200		
VIs5	sr-ef	sc	fl	hm?	pr?			4	3	480	240		
IIIBk	ds	sc	fl			ex		2	1	60			
IIIBk-VII	ds-ld	sc	fl			ex	sh	2	1	60			
VIs5	sr-ef	sc	fl	hm	pr			4	3	1400			
VBq3	da	sc	fl	hm		ex	sh	2	1	100			
Ia-IId1	rf-ft	sc				ex	c t	2	1	100			
IIIBk	ds	sc	fl				(ex) SU?	3	2	190			
VBq3	da	sc	fl			ex		2	1	90			
VBq3	da	sc	fl			ex		2	1	90			
IIIbk	ds	sc	fl				(ex)	3	2	90			
IIIAg	rxsr	sc	fl				hd	4	3	580			
Vbqt	dt	sc	fl			ex	dp sed	2	1	190		190	
Vbqt	dt	sc	fl			ex		2	1	50			
Vbqt	dt	sc	fl				sh	3	2	150			
Vbqt	ds	sc	fl			ex	dp	2	1	65			10000
IIIBk	ds	sc	fl	hm?		ex	SU	2	4	30			
IIIAg	rxsr	sc			pr		i	4	4	980			
IIIBk-VII	ds-sc	sc		hm?		ex	dp	2	1	100			

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
30	1885	4	7540	22					20	Min C,trb	4
100	6283	4	25133	22					20	Min C,trb	4
1460	2752042	120	330244992	15					14	trb-Min C	4
2640	4976294	80	398103552						40		
2450	4810575	100	481057500						40		
3500	6679827	120	801579240						12		
280	26389	4	105558	33					15	Mineral C	3
1440	1119666	90	100769962						24		
60	2827	4	11310						14		
60	2827	4	11310						14		
150	97782	4	391129	12					14	Mineral C	3
80	5027	4	20106						14		
60	2827	4	11310						14		
60	2827	4	11310						14		
1270	1077255	120	129270557	22	26				8	Mineral C	4
150	17672	4	70686						5		
50	4909	4	19635	28					14	Mineral C	5
90	6362	4	25447						14		
100	9425	4	37699						8		
70	4398	4	17593	18	28				70	Kiona C	4
90	6362	4	25447						6		
3500	10995600	130	1429428000						70		
450	159044	4	636174	45	31				70	Mineral C	4
80	5027	4	20106						6		
440	253653	4	1014611						6	Mineral C	5
50	2356	4	9425						70		
2160	5428685	120	651442176						8		
720	271434	90	24429082						24		
60	2827	4	11310						40		
60	2827	4	11310						40		
580	637745	110	70151928						24		
120	9425	4	37699						70		
100	7854	4	31416						70		
190	28353	4	113412						24		
90	6362	4	25447						24		
90	6362	4	25447						24		
250	17672	4	70686						24		
960	437311	25	10932768						30	Kiona C	
115	17161	4	68644						30	Kiona C	
90	3534	4	14137						30		
145	17082	4	68330						30		
60	3063	4	12252						30	Kiona C	
70	1649	4	6597						30		
490	377149	30	11314472						75	trb	
780	61261	4	245045						30		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	26Q20		Kiona C	3760	195	Tva2		ssw	24		ds				33			
13 06E	26Q21		Kiona C	3760	270	Tva2		ssw	24		xs				32			
13 06E	26Q22		Kiona C	3600	240	Tva2		ssw	24		xs				32			
13 06E	27C20		Kiona C	3960	205	Tva2		ssw	24		ds				32	39		
13 06E	27H20		Kiona C	3160	160	Tva2		ssw	24		ds				32			
13 06E	28D1		Kiona C	4200	85	Tva2		sse			xs				220			
13 06E	28D20		Kiona C	4000	95	Tva2		sse			xs				220			
13 06E	28D21		Kiona C	4000	100	Tva2		sse			xs				220			
13 06E	28D22		Kiona C	4000	105	Tva2		sse			xs				220			
13 06E	28E20		Kiona C	4000	90	Tva2		sse			xs				220			
13 06E	28F1		Kiona C	3080	105	Tva2		sse			xs				28			
13 06E	28F2		Kiona C	3100	5	Tva2		sse			xs			pl	28			
13 06E	28G1		Kiona C	2960	180	Tva2		sse			xs			pl	28			
13 06E	28G2		Kiona C	3000	245	Tva2		sse			xs				15			
13 06E	28H1		Kiona C	3000	265	Tva2		sse			xs				70	15		
13 06E	28H20		Kiona C	3820	335	Tva2		sse			xs				15			
13 06E	28J1		Kiona C	2580	90	Tva2		sse			ds				25	24	13	
13 06E	28J2		Kiona C	2640	285	Tva2		sse			ds				24	15		
13 06E	28J3		Kiona C	2800	235	Tva2		sse			xs				15	12		
13 06E	28J4		Kiona C	3040	270	Tva2		sse			xs			pl	32	12		
13 06E	28K1		Kiona C	2800	80	Tva2		sse			ds				25	24		
13 06E	28L1		Kiona C	3700	100	Tva2		sse			ds			pl	25	40		
13 06E	28R1		Kiona C	2360	250	Tva2		sse			xs			pl	13			
13 06E	28R2		Kiona C	2480	100	Tva2		sse			ds				70	15		
13 06E	28R20		Kiona C	2500	105	Tva2		sse			xs				13			
13 06E	34C20		Kiona C	3200	175	Tva2		sw	35		xs				15	14	25	
13 06E	34E1		Kiona C	2240	220	Tva2		sw	35		ds				12	59		
13 06E	34L1	*	Kiona C	1800	150	Tva2		sw	35		xs				15			
13 06E	34L2	*	Kiona C	2000	320	Tva2		sw	35		ss				15			
13 06E	34R1		Kiona C	3400	200	Tva2		sw	35		xs				181			
13 06E	35A20		Kiona C	3880	340	Tva2		sw	35	34	xs				32			
13 06E	35B1		Kiona C	3900	25	Tva2		sw	35		ss				39			
13 06E	35B20		Kiona C	3840	345	Tva2		sw	35	34	ss				219			
13 06E	35B21		Kiona C	3820	350	Tva2		sw	35	34	ss				219			
13 06E	35C1	*	Kiona C	4100	350	Tva2		sw	35		xs				32			
13 06E	35C20		Kiona C	3220	10	Tva2		sw	35	34	ss				32			
13 06E	35C21		Kiona C	3280	330	Tva2		sw	35	34	xs				32			
13 06E	35C22		Kiona C	3160	220	Tva2		sw	35	34	ds				32			
13 06E	35F1		Kiona C	4400	285	Tva2		sw	35	34	xs				186			
13 06E	35F2		Kiona C	4400	30	Tva2		sw	35	34	ss				186			
13 06E	35J1		Oliver C	4000	140	Tva2		sw	35	34	xs				220			
13 06E	35M1		Kiona C	3600	5	Tva2		sw	35	34	xs				40			
13 06E	35P1		Kiona C	3750	130	Tva2		sw	35	34	xs				39			
13 06E	35P2		Kiona C	3750	140	Tva2		sw	35	34	xs				39			
13 06E	35Q1		Kiona C	3800	200	Tva2		sw	35	34	ds				219			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBq3	da	sc	fl			ex	ch	2	1	180			
VBq3	da	sc	fl				ch (ex)	3	1	80			
VIs5	sr-ef	sc	fl		pr		on	3	2	1920			
VIs5	sr-ef	sc	fl	hm			dp	4	2	1300			
IIIAg	rxsr	sc	fl	hm			dp	3	1	300			
Ia-IId1	rf-rt	sc					BIC t c	3	1	40			
VBq3	da	sc	fl				BIC ch	3	1	70			
VBq3	da	sc	fl				BIC ch	3	1	70			
VBq3	da	sc	fl				BIC ch	3	1	70			
VBq3	da	sc	fl				BIC ch	2	1	100			
VBqt	dt	sc	fl			ex	h sed	2	1	85		575	
IIIAg	rxsr	sc	fl	hm	pr		SU	3	1	525			
VBqt	dt	sc	fl				SU sed	2	1	105		1935	2090
VBqt	dt	sc				ex	SU sed	2	1	40		1590	
IIIAh	dsr	sc	fl				(ex) sh SU on	3	2	260			
VBq3	da	sc	fl				BIC ch	3	1	70			
IIIAg	rxsr	sc	fl		pr		l (ex) SU	3	1	410			
VBqt	dt	sc	fl				h BIC (ex)SU	2	1	95		575	
VBqt	dt	sc	fl				dp h BIC	3	1	105		420	
VBq3	da	sc	fl				BIC ch (ex)	3	1	155	420		
IIIAg	rxsr	sc	fl		pr		(ex) SU l	2	1	420			
VIs5	sr-ef	sc	fl	hm	pr		c i SU hd	4	1	3140			
VBqt	dt	sc	fl			ex	SU? ch	2	1	105		210	
IIIAg	dsr	sc	fl		pr?		(ex) SU l	3	1	420			
VBq3	da	sc	fl				BIC t c	2	1	70			
VIs5	sr-ef	sc	fl	hm			on	4	2	2910			
IIIAg	rxsr	sc	fl	hm			SU	3	1	600			
IIIBk	ds	sc	fl	hm		ex	SU	1	1	35			
Ia-IId1	rf-rt	sc					c t BIC	3	1	60			
Ia-IId1	rf-rt	sc					c dp (ex) D	1	1	100			
IIIBk-VII	ds-cb	sc	fl			ex	ch	1	1	30			
VBqt	dt	sc	fl				ch	3	2	100		800	
IIIBk-VII	ds-cb	sc	fl			ex	ch	1	1	30			
VBqt-VII	dt-rd	sc	fl			ex	ch	3	1	90			
VBqf	df	sc	fl			ex	dp	1	1	150			
VBqt	dt	sc	fl				BIC	3	2	80			
VBqt-VII	dt-sc	sc	fl			ex	ch BIC	1	1	80			
IIIBk	ds	sc					(ex) SU	3	1	90			
VBq3	da	sc	fl				Sh BIC	3	3	200			
VBq3	da	sc	fl				BIC sh	3	2	120			
IIIBk-VII	ds-sc	sc				ex		2	1	190			
VBqt	dt	sc	fl				BIC ch	3	2	200			
IIIBk-VII	ds-sc	sc	fl			ex		2	2	90	145		
VBqt-VII	dt-sc	sc	fl	hm		ex		2	2	120	240		
VBqt-VII	dt-sc	sc	fl			ex	dp	2	1	90	145	5000	

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
180	25447	4	101788						30		
60	3770	4	15080						30		
2400	3619123	120	434294784						30		
1680	1715314	90	154378224						20		
480	113098	35	3958416						5		
2640	82938	4	331753						70		
60	3299	4	13195						70		
60	3299	4	13195						70		
60	3299	4	13195						70		
120	9425	4	37699						70		
30	2003	4	8011	11	15				6	Kiona C	4
835	344300	80	27543978						6	Kiona C	4
100	8247	4	32987	22	11				6	Kiona C	4
150	4712	4	18850	11					6	Kiona C	4
305	62282	25	1557056	15					70	Kiona C	4
60	3299	4	13195						70		
200	64403	50	3220140	28	28				5	Kiona C	4
75	5596	4	22384	22					70	Kiona C	4
50	4123	4	16493	17					70	Kiona C	5
75	9130	4	36521	22					70		5
335	110506	40	4420231	22	22				5	Kiona C	4
1260	3107357	90	279662090	22					5	Kiona C	5
95	7834	4	31337	39					5	Kiona C	4
630	207817	50	10390842	50					5	Kiona C	4
60	3299	4	13195						5		
1920	4388187	100	438818688						3		
1500	706860	60	42411600						4		
500	13745	10	137445	10	12				4	Kiona C	3
690	32516	4	130062	38	40				75		3
200	15708	4	62832						75		
30	707	4	2827						25		
80	6283	4	25133						17		
30	707	4	2827						17		
120	8482	4	33929						17		
20	2356	4	9425						4		
110	6912	4	27646						75		
80	5027	4	20106						75		
480	33929	4	135717						75		
200	31416	4	125664						75		
100	9425	4	37699						75		
340	50737	4	202947						12		
120	18850	4	75398						75		
50	3534	4	14137						5		
150	14137	4	56549						5		
290	20499	4	81996						5		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
13 06E	35Q2		Kiona C	3800	165	Tva2		sw	35	34	xs				219			
13 06E	35Q20		Oliver C	4800	80	Tva2		sw	35	34	xs				181	32	220	
13 06E	35R20		Oliver C	3680	20	Tva2		sw	35	34	xs				220			
14 04E	36D1		Soos C	3400	180	Qls	Tpg	sw			xs				163			
14 04E	36E1		Soos C	2400	280	Tpg		sw			xs				163			
14 04E	36E2		Soos C	2160	160	Qls	Tpg	sw			xs				165			
14 04E	36F1		Soos C	2700	175	Tpg	Qls	wnw			xs	fa			165			
14 04E	36K1		Soos C	3200	275	Tpg	Qls	nw	18	62	ds	fa			215		162	163
14 04E	36N1		Soos C	2600	170	Tpg	Qls	nw			xs				165			
14 04E	36P1		Soos C	3000	270	Qls	Tpg	nw	18	62	ds				165	163	215	
14 05E	01C1		NF Mineral C	2880	180	Tva		ese			xs			pl	160			
14 05E	01D1		Mineral C	2600	195	Tva		ese			xs			pl	160			
14 05E	01H1		NF Mineral C	2280	140	Tva		ese			ds				165			
14 05E	01H2		NF Mineral C	2320	170	Tva		ese			xs				165			
14 05E	01J1		NF Mineral C	2400	145	Tva		ese			ds				165			
14 05E	01K1		NF Mineral C	2160	190	Tva		ese			xs			pl	164			
14 05E	03A1		Mineral C	1350	130	Qdh	Tva3	se			xs				180			
14 05E	03C1		Mineral L	1700	205	Qdh	Tva3	se			xs				203			
14 05E	03C20		Mineral L	1640	210	Qdh	Tva3	se			xs				203			
14 05E	03C21		Mineral L	1640	210	Qdh	Tva3	se			xs				203			
14 05E	03L1		Mineral C	2040	195	Tva3		se			ds				203			
14 05E	03L2		Mineral C	2100	170	Tva3		se			ds				203			
14 05E	03L20		Mineral C	2000	175	Tva3		se			ds				203			
14 05E	03M1		Mineral C	2120	175	Tva3		se			ds				203			
14 05E	05E1		East C	1600	275	Tva2		se			ss				147			
14 05E	05G20		East C	1600	340	Tva3	Qdht	se			ss				147			
14 05E	05G21		East C	1600	350	Tva3	Qdht	se			ss				147			
14 05E	05G22		East C	1600	340	Tva3	Qdht	se			ss				147			
14 05E	05G23		East C	1600	345	Tva3	Qdht	se			ss				147			
14 05E	05G24		East C	1640	345	Tva3	Qdht	se			ss				147			
14 05E	05G25		East C	1600	340	Tva3	Qdht	se			ss				147			
14 05E	05G26		East C	1680	330	Tva3	Qdht	se			ss				147			
14 05E	05G27		East C	1660	335	Tva3	Qdht	se			ss				147			
14 05E	05H1		East C	2000	315	Tva3	Qdht	se			ss				146			
14 05E	05M1		Roundtop C	1980	345	Tva3		se			ss				250	147		
14 05E	06J1		East C	1800	305	Tva3	Qdht	se			xs				147	146		
14 05E	06L1		East C	1480	30	Qdht		w	56		xs				165	146		
14 05E	06L2		East C	1600	35	Tno		w	56		xs				165			
14 05E	06L3		East C	1700	35	Tno		w	56		xs				165			
14 05E	06P1		East C	2600	30	Tno		w	56		xs			pl	165	163		
14 05E	07C1		East C	2600	195	Tva		w	30	56	xs			pl	165			
14 05E	07L1		East C	2000	350	Tva		w	30	56	xs			pl	165			
14 05E	07N20		East C	2280	35	Tva		w	30	56	ss				165			
14 05E	07P1		East C	2100	260	Tva		w	30	56	ds				165			
14 05E	07P2		East C	2200	270	Tva		w	30	56	ds				165			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBqt-VII	dt-sc	sc	fl			ex	dp sed ch	2	1	100	100		
Ia-IId1	rf-ft	sc					BIC t	3	4	40			
VBq3	da	sc	fl			ex	dp	2	1	120			
VIs5	sr-ef	sc	fl	hm			I on	4	2	2800			
IIIBK	ds	sc	fl			ex	SU (ex)	2	1	82			
IIIBK	ds	sc	fl			ex	SU (ex)	2	1	266			
IIIBk	ds	sc	fl			ex	SU	2	1	200			
VIs5	sr-ef	sc	fl	hm			I	4	2	1595			
IIIAg	rxsr	sc					h SU	3	1	300			
VIs5	sr-ef	sc	fl	hm			on	4	2	1800	1500		
IIIAg	rxsr	sc	fl				i (ex) on	3	2	1740			
IIIBk	ds	sc	fl				sh (ex)	2	1	260	260		
VBq3	da	sc	fl				sh (ex) ch	2	1	220			
VBq3	da	sc	fl				sh (ex) dp ch	2	1	95	305		
VBq3	da	sc	fl				sh (ex) h ch	3	1	215			
VIs5	sr-ef	sc	fl				I hm dp	3	2	870	870		
IIIBk	ds	sc					SU (ex)	2	1	250			
IIIAg	rxsr	sc	fl				(ex) on	3	2	465			
IIIBk	ds	sc	fl			ex		2	1	90			
IIIBk	ds	sc	fl			ex		2	1	90			
IIIAg	rxsr	sc	fl					4	4	420	295		
IIIAg	rxsr	sc	fl				sh	4	2	1045			
IIIBk	ds							2	1	90			
IIIAg	rxsr	sc	fl				dp	4	2	420			
VBq3	da	sc	fl				ch dp?	3	2	180	1015		
VBq3	da	sc	fl				sh ch	2	1	40			
VBq3	da	sc	fl				sh ch	2	1	40			
VBq3	da	sc	fl	hm?			sh ch	2	1	40			
VBq3	da	sc	fl	hm			sh ch	2	1	40			
VBq3	da	sc	fl	hm?			sh ch	2	1	40			
VBq3	da	sc	fl				sh ch	2	1	40			
VBq3	da	sc	fl				sh ch	2	1	40			
VBq3	da	sc	fl				sh ch	2	1	40			
VIs5	sr-ef	sc		hm?			on	4	3	1000			
VIs5	sr-ef	sc	fl	hm?			SU?	4	2	660			
VIs5	sr-ef	sc	fl				I	4	3	1245			
VBq3-VII	da-sc	sc	fl			ex	dp ch	2	1	60	350		
VBq3-VII	da-cb	sc	fl			ex	dp ch	2	1	70			
VBq3	da	sc	fl			ex	dp ch	2	1	105	330		
VIs5	sr-ef	sc	fl	hm			on	3	2	1500			
VIs5	sr-ef	sc	fl				SU?	3	4	1255			
IIIAg	rxsr	sc	fl				h? SU?	4	3	620			
VBq3-VII	da-sc					ex	ch's	2	1	120			
VBq3-VII	da-sc	sc	fl			ex	dp	2	1	40			
VBq3-VII	da-sc	sc	fl			ex	dp	2	1	40			

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
60	4712	4	18850						5		
3000	94248	4	376992						60		
120	11310	4	45239						12		
3000	6597360	120	791683200	27	33				40	Trout	3
368	23700	4	94801	22	22				40		5
307	64137	4	256549	29	29				40		4
600	94248	4	376992	38	21				40	trb(2) Trout	5
1500	1879070	90	169116255	20	24				40	trb(2) Trout	3
900	212058	40	8482320	30	24				40	trb(2) Trout	4
2100	2968812	90	267193080	23	22				40	trb(2) Trout	3
1695	2316380	80	185310418						40		
260	53093	3	159279						40		
175	30238	4	120952						40		
80	5969	4	23876						40		
190	32084	4	128334						40		
650	444144	80	35531496						40		
500	98175	4	392700						20	Mineral C	
710	259300	50	12964991						60	Mineral C	
270	19085	4	76341						60		
90	6362	4	25447						60		
270	89064	50	4453218						60	Mineral C	
920	755084	50	37754178						60	Mineral C	
60	4241	4	16965						60		
670	221012	50	11050578						60	trb1	
150	21206	5	106029						60		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
30	942	4	3770						20		
4220	3314388	80	265151040						60	rd,East C	
1375	712751	90	64147545						15	lg,rd	
1160	1134275	70	79399228						25		
75	3534	4	14137						5		
85	4673	4	18693						15		
60	4948	4	19792						15		
1300	1531530	100	153153000						60		
1255	1237025	100	123702464						8	Coal C	
700	340864	60	20451816						25		
	0	6	0						12		
40	1257	4	5027						12		
45	1414	4	5655						12		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	08B1		Roundtop C	1780	185	Qdht		w	30		xs				147	50		
14 05E	08L1		Roundtop C	1700	60	Qdht		w	30		ss		f		200			
14 05E	08P1		Roundtop C	1920	75	Qdht		w	30		ss		f		200		49	
14 05E	11B1		Mineral C	2400	280	Tva	Qls	se			xs				165			
14 05E	11G1		Mineral C	2600	230	Tva	Qls	se			xs				165			
14 05E	11G2		NF Mineral C	2600	250	Qls	Tva	se			xs				165			
14 05E	11G20		Mineral C	2300	230	Tva	Qls	se			xs				165			
14 05E	11Q1		NF Mineral C	1560	145	Tva	Qls	se			ds				165			
14 05E	11Q20		NF Mineral C	1660	145	Tva	Qls	se			ds				160			
14 05E	11R1		NF Mineral C	2080	130	Tva	Qls	se			ds				165			
14 05E	11R2		NF Mineral C	2240	155	Qls	Tva	se			ds				164			
14 05E	11R20		NF Mineral C	2000	125	Qls	Tva	se			ds				165			
14 05E	11R3		NF Mineral C	1800	345	Qls	Tva	se			ss				161			
14 05E	12B1		NF Mineral C	1740	205	Tva	Qdh	se			xs				199	128		
14 05E	12F1		NF Mineral C	1720	180	Tva	Qdh	se			xs				203			
14 05E	12J1		NF Mineral C	1960	195	Tva	Qdh	se			xs			pl?	164			
14 05E	12K1		NF Mineral C	1760	275	Tva	Qdh	se			xs				203			
14 05E	12K2		NF Mineral C	1720	235	Tva	Qdh	se			xs				203			
14 05E	12K20		NF Mineral C	1700	160	Qdh	Tva	se			xs				197			
14 05E	12R1		NF Mineral C	1920	235	Tva	Qdh	se			xs			pl?	164			
14 05E	12R20		NF Mineral C	1740	170	Qdh	Tva	se			xs				164			
14 05E	13A1		NF Mineral C	2280	20	Tva		se			xs				161			
14 05E	13C1		NF Mineral C	3680	5	Tva		se			ss				12			
14 05E	13F1		NF Mineral C	2760	320	Tva		se			ss				161			
14 05E	13G1		NF Mineral C	3400	45	Tva	Qls	se			xs			pl	216	161		
14 05E	13K1		NF Mineral C	3200	85	Tva		se			xs				216			
14 05E	13K2		NF Mineral C	3000	40	Tva		se			xs				216			
14 05E	13K20		NF Mineral C	3200	65	Tva		se			xs				216			
14 05E	13L1		NF Mineral C	3700	355	Tva		se			ss				216	161		
14 05E	13L2		NF Mineral C	3280	355	Tva		se			ss				216			
14 05E	13L3		NF Mineral C	3280	0	Tva		se			ss				161			
14 05E	13L4		NF Mineral C	3200	345	Tva		se			ss				161			
14 05E	13M1		Mineral C	3480	265	Qls	Tva	se			xs				164	165		
14 05E	13P1		Mineral C	3720	260	Tva	Qls	se			xs			pl?	32		31	
14 05E	13R1		NF Mineral C	3440	30	Tva		se			xs			pl?	216			
14 05E	14A1		NF Mineral C	2100	340	Qls	Tva	se			ss				160			
14 05E	14A20		NF Mineral C	1920	250	Qls	Tva	se			xs				160			
14 05E	14A21		NF Mineral C	2300	300	Qls	Tva	se			ss				165			
14 05E	14B1		NF Mineral C	2000	320	Tva		se			ss				164	165	160	
14 05E	14E1		Mineral C	1680	270	Qls		se			xs			pl	164			
14 05E	14G1		NF Mineral C	1900	280	Qls	Tva	se			xs				181			
14 05E	14G2		NF Mineral C	1900	280	Qls	Tva	se			xs				184			
14 05E	14G3		NF Mineral C	1900	285	Qls	Tva	se			xs				184			
14 05E	14K1		NF Mineral C	2240	320	Qls	Tva	se			ss				159			
14 05E	14Q1		Mineral C	2280	165	Qls	Tva	se			ss				164	165		

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
IIIBk	ds	sc	fl	hm			BIC sh	3	2	310	145		
VBq3-VII	da-sc	sc	fl			ex	dp sh	2	1	100	240		
IIIAg	rxsr	sc	fl				hd af? SU?	4	2	800			
VBq3	da	sc					BIC ch	3	2	70	950		
VBqt	dt	sc					ch bg BIC	2	1	90	1510		
VIs5	sr-ef	sc	fl					4	2	3000			
IIIBk	ds	sc	fl			ex	dp	2	1	180			
IIIAh	dsr	sc	fl				SU (ex) on	3	2	280			
IIIBk	ds	sc				ex	SU	2	1	30			
IIIBk	ds	sc	fl			ex	SU BIC (ex)	3	1	150			
IIIAg	rxsr	sc	fl				SU on (ex)	3	2	900			
IIIBk	ds	sc					(ex)	3	2	15			
IIIAh	dsr	sc	fl				SU (ex)	3	1	300			
IIIBk-VII	ds-cb	sc	fl	hm			(ex) sh	2	2	150			
IIIBk	ds	sc		hm			SU (ex) sh	2	1	120			
IIIAh	dsr	sc	fl	hm			SU hw	3	2	715			
IIIBk	ds	sc					SU (ex) sh	2	1	160			
IIIBk	ds	sc					SU (ex) sh	3	1	170			
IIIBk	ds	sc	fl			ex	SU	2	2	60			
IIIAh	dsr	sc	fl				SU hw (ex) on	3	2	590			
IIIBk	ds	sc		hm			(ex) sh	2	1	75			
IIIBk	ds	sc	fl			ex	dp BIC	2	1	170	190		
VIs5	sr-ef	sc	fl		pr		SU I	4	2	1385	2310		
IIIAh	dsr	sc	fl	hm			h bg SU?	2	3	390			
IIIAg	rxsr	sc	fl		pr		SU on I	4	3	2605			
VBqt	dt	sc	fl				ch h sh	3	2	70		1180	
VBqt	dt	sc	fl	hm			ch h sh	3	2	80		235	
VBqt	dt	sc	fl				ch h BIC	3	1	80			
VIs5	sr-ef	sc	fl				on bg	4	4	2750			
VBq3	da	sc	fl				ch h BIC	2	2	60		400	
VBq3	da	sc	fl				ch h BIC	3	2	80		400	
VBq3	da	sc	fl				ch h BIC	3	2	40		355	
VIs5	sr-ef	sc	fl				SU?	4	2	4700			
IIIAg	rxsr	sc	fl					4	4	3145			
VBqt	dt	sc	fl	hm			ch h BIC	2	1	110		630	
VIs5	sr-ef	sc	fl				on i	4	2	2075	1950		
IIIBk	ds	sc	fl				(ex) sh	3	2	120			
IIIBk	ds	sc		hm			(ex) sh	2	3	90			
VIs5	sr-ef	sc	fl	hm?			I on	3	2	1990	1950		
VIs5	sr-ef	sc	fl	hm			hw wt h	4	2	2880	1950		
VBq3	da	sc	fl			ex	sh	3	2	330			
IIIBk	ds	sc	fl			ex	sh	3	2	80			
IIIBk	ds	sc	fl			ex	sh	2	2	80			
VIs5	sr-ef	sc	fl				I on wt	4	1	1660	2285		
IIIBk	ds	sc	fl				(ex) dp	2	1	80	165		

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)			sc	fl	ot	cc age	(GENERAL NOTES)	#
				1	2	1	2	3			
150	36521	4	146084						60	hw	
80	6283	4	25133						10	Gallup C	
1320	829382	80	66350592						10		
50	2749	4	10996						90	rd	
85	6008	4	24033						60	rd	
4500	10602900	120	1272348000						60		
120	16965	4	67859						10		
860	189124	30	5673730						60		
360	8482	4	33929						60		
150	17672	6	106029						60	NF Mineral C	
1080	763409	50	38170440						60		
150	1767	4	7069						60		
840	197921	30	5937624						60		
125	14726	4	58905						40	Mineral C	
335	31573	4	126292						40	Mineral C	
670	376246	40	15049835						40	Mineral C	
275	34558	4	138230						40	Mineral C	
505	67427	4	269706						40	Mineral C	
50	2356	4	9425						40		
420	194622	40	7784885						60	Mineral C	
150	8836	4	35343						40		
210	28039	4	112155						60		
2415	2626986	120	315238354						60	Mineral C	
315	96486	30	2894592						60	trb1	
2500	5114918	90	460342575						60	Mineral C	
70	3848	4	15394						60	trb1	
110	6912	4	27646						60	trb1	
80	5027	4	20106						60		
2750	5939588	120	712750500						60	trb1	
60	2827	4	11310						60	trb1	
80	5027	40	201062						60	trb1	
40	1257	4	5027						60	trb1	
5200	19195176	120	2303421120						60	Mineral C	
1100	2717091	80	217367304						60	trb1	
80	6912	4	27646						60	trb2	
1870	3047548	90	274279351						60		
150	14137	4	56549						60		
90	6362	4	25447						60		
1035	1617649	90	145588420						60		
3000	6785856	120	814302720						60	trb1	
500	129591	4	518364						60		
85	5341	4	21363						60		
115	7226	4	28903						60		
1825	2379369	90	214143237						60		
85	5341	4	21363						60		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	14Q2		Mineral C	2280	165	Qls	Tva	se			ss				160	165		
14 05E	14Q20		Mineral C	2800	320	Tva		se			ss				165			
14 05E	14R1		Mineral C	3200	335	Qls	Tva	se			ss				165			
14 05E	15A1		NF Mineral C	1600	350	Qls	Qdh	e	35	54	xs				165		136	
14 05E	15B20		Mineral C	1540	295	Qdh		e	35	54	ss				180			
14 05E	15D1		Mineral C	1700	95	Qdh		e	35	54	ds				7			
14 05E	15G1		Mineral C	1600	295	Qls	Qdh	e	35	54	xs				243			
14 05E	15G20		Mineral C	1520	245	Qls	Qdh	e	35	54	xs				180			
14 05E	15H1		Mineral C	1520	290	Qls	Qdh	e	35	54	ss				116			
14 05E	15J1		Mineral C	1760	270	Qls	Qdh	e	35	54	ss		f?		243			
14 05E	15J2		Mineral C	1760	285	Qls	Qdh	e	35	54	ss				160			
14 05E	15K1		Mineral C	1580	25	Tpg		e	35	54	xs				243	165		
14 05E	15N1		Mineral C	2500	25	Tpg		e	35	54	xs		f		160	165		
14 05E	15Q1		Mineral C	2300	280	Tpg		e	35	54	ds				165			
14 05E	15Q20		Mineral C	1700	95	Qls	Tva	e	35	54	ds				165			
14 05E	15Q21		Mineral C	1720	200	Qls	Tpg	e	35	54	xs				165			
14 05E	16F1		Roundtop C	2000	15	Qdh					xs	fa	f	pl	231		126	
14 05E	17J1		Roundtop C	1800	340	Tpg		w	20	25	xs	fa	f		231	232	51	
14 05E	17N1		Roundtop C	2480	65	Tpg		w	20	25	ss				165		233	
14 05E	17P1		Roundtop C	2000	60	Tpg		w	20	25	ss				233			
14 05E	18C1		East C	2400	35	Tva0		w	35		ss				165			
14 05E	18C2		East C	2360	30	Tva0		w	35		ss				165			
14 05E	18E20		East C	2700	230	Tpg	Qls	w	35		ds				165			
14 05E	18H20		Coal C	1880	15	Qls	Tpg	w	35		xs				146			
14 05E	18J1		Coal C	2600	305	Qls	Tpg	w	35		xs				164			
14 05E	18L1		Coal C	3400	50	Qls	Tpg	w	35		ss				164			
14 05E	18M1		East C	3040	260	Tva0		w	35		ds				165			
14 05E	18M20		East C	2800	255	Tva0		w	35		ds				165			
14 05E	18M21		East C	2840	285	Tva0		w	35		ds				165			
14 05E	18M22		East C	2880	245	Tva0		w	35		ds				165			
14 05E	18Q1		Coal C	3100	350	Tpg	Qls	w	35		ss			pl	214	215	220	
14 05E	19D1		Roundtop C	3400	80	Tpg		w	35		ss				220	165		
14 05E	19F1		Roundtop C	3840	0	Qls		w	35		xs			pl	175			
14 05E	19G1		Roundtop C	3400	60	Tva0	Tpg	w	35		ss				219			
14 05E	19J1		Roundtop C	2680	10	Tpg		w	35		xs			pl	165			
14 05E	19J20		Roundtop C	2700	55	Tpg	Qls	w	25		ss				165			
14 05E	19J21		Roundtop C	2680	35	Tpg	Qls	w	25		ss				165			
14 05E	19J22		Roundtop C	2660	10	Tpg	Qls	w	25		xs				165			
14 05E	19J23		Roundtop C	2640	10	Tpg	Qls	w	25		xs				165			
14 05E	19J24		Roundtop C	2660	40	Tpg	Qls	w	25		xs				165			
14 05E	19J25		Roundtop C	2640	20	Tpg	Qls	w	25		xs				165			
14 05E	19J26		Roundtop C	3000	65	Tpg	Qls	w	25		xs				165			
14 05E	19J27		Roundtop C	2580	55	Tpg	Qls	w	25		xs				165			
14 05E	19Q1		Roundtop C	3560	135	Tpg		w	25	27	ss				219			
14 05E	20A1		Roundtop C	1880	275	Qdh		w	35		ds	fa			231	220		

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
IIIBk	ds	sc	fl				(ex) BIC	2	1	60	60		
IIIBk	ds	sc	fl				(ex) sh ch	2	3	180			
Ia-IId1	rf-rt	sc					sw t	3	1	60			
IIIAh	dsr	sc	fl	hm			SU bg	3	2	480			
IIIBk	ds	sc	fl			ex	SU dp l	1	1	30			
IIIBk	ds	sc					SU	3	2	340			
IIIBK	ds	sc	fl				sh SU hw	3	2	40			
IIIBk	ds	sc	fl	hm		ex	SU	1	1	10			
IIIBK	ds	sc	fl	hm			af?wt hw (ex)	3	3	180	460		
IIIAh	dsr	sc	fl	hm			sh SU (ex)	2	1	490			
IIIAh	dsr	sc	fl		pr		l sh hw	3	2	720	490		
IIIBk	ds	sc	fl				hw SU	3	2	340			
VIs5	sr-ef	sc	fl				on SU	3	2	1920			
IIIAh	dsr	sc	fl	hm			SU hw on	3	1	400			
IIIBk	ds	sc	fl			ex	SU	1	1	140			
IIIBk-VII	ds-sc	sc	fl				SU (ex)	1	1	90			
VIs5	sr-ef	sc	fl				SU h?	4	2	920	490		
VIs5	sr-ef	sc	fl				l SU?	4	2	1000	770		
VIs5	sr-ef	sc	fl				h d	3	2	1340			
IIIAg	rxsr	sc	fl				h dp af	3	3	600	1900		
IIIBk-VII	ds-sc	sc	fl			ex	sh	2	1	150	700		
IIIBk-VII	ds-sc	sc	fl			ex		2	1	10			
VIs5	sr-ef	sc	fl	hm			hd dp SU?	4	2	800			
VBqf-VII	df-sc	sc	fl	hm		ex	ch dp	2	1	30			
VBqt	dt	sc	fl				sed af ch?	2	2	70		2250	
VIs5	sr-ef	sc	fl				on h af	4	2	1800	3490		
VBq3	da	sc	fl	hm			on	3	3	120			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	70			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	60			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	40			
VBqt	dt	sc	fl			ex	ch dp af	2	1	155		3490	
VIs5	sr-ef	sc	fl					4	2	2200			
VIs5	sr-ef	sc	fl				wt pd	4	2	2190			
VBq3	da	sc	fl			ex	dp h	2	1	45			
VBqt-VII	dt-sc	sc	fl			ex	sed ch	2	1	15		300	1275
VBqt-VII	dt-sc	sc	fl	hm		ex	ch sed dp	2	1	30			
VBqt-VII	dt-sc	sc	fl	hm		ex	ch sed dp	2	1	35			
VBqt-VII	dt-sc	sc	fl			ex	ch sed dp	2	1	25			
VBqt-VII	dt-sc	sc	fl			ex	ch sed dp	2	1	30			
IIIBk-VII	ds-sc	sc	fl	hm		ex	ch sed dp	2	1	35			
IIIBk-VII	ds-sc	sc	fl			ex	ch sed dp	2	1	20			
VBq3	da	sc	fl			ex	ch	2	1	35			
VBqt	dt	sc	fl			ex	ch	2	1	15			
IIIBk	ds	sc	fl			ex	dp ch	2	1	105	180		
VIs5	sr-ef	sc	fl				l dp	3	1	730	500		

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
85	4006	4	16022						60		
180	25447	4	101788						90		
3000	141372	3	424116						60		
935	352488	20	7049750						60	NF Min C	
1020	24033	12	288399						60		
2505	668925	10	6689252						60	Mineral C	
1310	41155	10	411550						60	Min C,rd	
30	236	4	942						60		
140	19792	4	79168						60	trb1	
860	330968	40	13238702						60	rd,Min C	
610	344948	60	20696861						60	Mineral C	
1020	272377	15	4085651						60	Mineral C	
2910	4388187	100	438818688						60		
820	257611	30	7728336						60	Mineral C	
280	30788	4	123151						60		
350	24740	4	98960						60		
690	498572	80	39885754						60		
1000	785400	100	78540000						60		
570	599889	80	47991082						60		
360	169646	60	10178784						60	Gallup C	
180	21206	4	84823						12		
10	79	4	314						12		
700	439824	80	35185920						12		
30	707	6	4241						12		
45	2474	4	9896						50	Coal C	
2500	3534300	100	353430000						12	Coal C,rd	
120	11310	8	90478						12		
110	6048	3	18143						12		
30	1414	4	5655						12		
50	1571	4	6283						12		
40	4869	10	48695						12	Coal C,rd	
2200	3801336	110	418146960						12		
1345	2313435	90	208209147						12	trb1	
35	1237	4	4948						12		
35	412	4	1649						12	trb2	
35	825	4	3299						12		
35	962	4	3848						12		
40	785	4	3142						12		
40	942	4	3770						12		
30	825	4	3299						12		
30	471	4	1885						12		
.	0	4	0						12		
20	236	3	707						12		
90	7422	4	29688						12		
520	298138	50	14906892						15	Roundtop C	

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	20D1		Roundtop C	3400	90	Qls		w	20	25	ss				220	165	231	233
14 05E	20D2		Roundtop C	2640	90	Tpg		w	20	25	ss				165			
14 05E	20L1		Roundtop C	2200	115	Qdh		w	20	25	ss				165			
14 05E	20L20		Roundtop C	2080	65	Tpg		w	20	25	ss				233			
14 05E	20L21		Roundtop C	2040	190	Tpg		w	20	25	ss				233			
14 05E	20M1		Roundtop C	2640	80	Tpg		w	20	25	ss				219	220		
14 05E	20M2		Roundtop C	2680	140	Tpg		w	20	25	ss				219	220		
14 05E	20M20		Roundtop C	2620	70	Tpg	Qls	w	25		ss				165			
14 05E	20M21		Roundtop C	2600	40	Tpg Ql	Qls	w	25		ss				165			
14 05E	20M22		Roundtop C	3200	80	Tpg		w	25		ss				165			
14 05E	21D20		Roundtop C	2200	350	Tpg					xs	fa			126			
14 05E	21D21		Roundtop C	2200	350	Tpg					xs	fa			126			
14 05E	21D22		Roundtop C	2200	300	Tpg					xs	fa			126			
14 05E	21E1		Roundtop C	2000	310	Tpg					xs	fa			232			
14 05E	21M1		Roundtop C	2000	190	Tpg					xs	fa			126			
14 05E	21N20		Roundtop C	1800	15	Tpg					xs	fa			231			
14 05E	21N21		Roundtop C	1840	5	Tpg					xs	fa			231			
14 05E	21N22		Roundtop C	1880	0	Tpg					xs	fa			231			
14 05E	22A1	*	Mineral C	2200	20	Tpg		e	35	54	xs				165			
14 05E	22A2	*	Mineral C	1740	240	Qls		e	35	54	ss				165			
14 05E	22A20		Mineral C	2080	30	Tpg		e	35	54	xs				160			
14 05E	22A21	*	Mineral C	1720	225	Tpg		e	35	54	xs				160			
14 05E	22A22	*	Mineral C	1680	190	Tpg		e	35	54	xs				160			
14 05E	22F20		Mineral C	3040	300	Tpg					xs				215			
14 05E	22F21		Mineral C	3040	280	Tpg					xs				215			
14 05E	22H1	*	Mineral C	2680	70	Tpg					xs				165	106		
14 05E	22H2	*	Mineral C	2540	60	Tpg					xs				165			
14 05E	22H20	*	Mineral C	2280	60	Tpg					ds				181			
14 05E	22H21	*	Mineral C	2280	30	Tpg					ds				181			
14 05E	22H3	*	Mineral C	2540	60	Tpg					xs				165			
14 05E	22K1		Mineral C	3228	70	Tva	Tpg				ds				215	105	165	106
14 05E	22L1		Roundtop C	2900	260	Tva					ss		f		220			
14 05E	23E1	*	Mineral C	2000	270	Tpg		se			ds				165			
14 05E	23E2	*	Mineral C	2100	30	Tpg		se			ds				165			
14 05E	23E3	*	Mineral C	2000	35	Tpg		se			ds				165			
14 05E	23H1		Mineral C	2520	220	Tva		se			xs			pl?	164	165		
14 05E	23H2		Mineral C	2600	340	Tva		se			xs				164	165		
14 05E	23H20		Mineral C	2200	250	Tva		se			xs			pl	160			
14 05E	23K1	*	Mineral C	1880	180	Tva		se			xs				165	160		
14 05E	23K20		Mineral C	1860	215	Tva		se			xs				160			
14 05E	23K21		Mineral C	1880	170	Tva		se			xs				165			
14 05E	23L1	*	Mineral C	2200	10	Tva		se			xs				165			
14 05E	23L2		Mineral C	1880	190	Tva		se			xs				165			
14 05E	23L20	*	Mineral C	1900	15	Tva		se			xs				165			
14 05E	23L21	*	Mineral C	1960	5	Tva		se			xs				165			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VIs5	sr-ef	sc	fl	hm			on	4	2	3425	2120		
VBq3	da	sc	fl				BIC ch	3	3	40			
IIIAh	dsr	sc	fl				BIC (ex) hw	3	2	135	460		
VBq3	da	sc	fl				(ex) ch	2	1	60			
VBq3	da	sc	fl				(ex) ch	2	1	40			
VBqt-VII	dt-sc	sc	fl					2	1	20		230	1540
VBqt-VII	dt-sc	sc	fl					2	1	20		60	1730
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	44			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	40			
VIs5	sr-ef	sc	fl					4	3				
VBqt	dt	sc	fl				(ex) ch	2	1	40			
VBqt	dt	sc	fl				(ex) ch	2	1	40			
VBqt	dt	sc	fl	hm			(ex) ch	2	1	40			
VIs5	sr-ef	sc	fl		pr		l	3	2	800	770		
VIs5	sr-ef	sc	fl				hm i	3	2	500	770		
VBqt	dt	sc	fl				(ex) ch	2	1	40			
VBqt	dt	sc	fl				(ex) ch	2	1	40			
VBqt	dt	sc	fl				(ex) ch	2	1	40			
VBq3-VII	da-ld	sc	fl			ex	dp	2	1	120	460		
IIIBk-VII	ds-cb	sc	fl			ex	SU?	2	1	100			
VBq3	da	sc	fl				ch	2	2	60			
IIIBk-VII	ds-cb	sc	fl			ex	SU	1	1	30			
IIIBk-VII	ds-cb	sc	fl			ex	SU	1	1	30			
VBq3	da	sc	fl			ex	ch	2	1	35			
VBq3-VII	da-sc	sc	fl			ex	ch	2	1	35			
IIIAg	rxsr	sc	fl				rx SU on	3	3	1060			
VBqt	dt	sc	fl	hm		ex	dp ch	2	1	85		455	
VBq3	da	sc	fl			ex	ch	2	1	50			
VBq3	da	sc	fl				ch sh	3	1	50			
VBqt	dt	sc	fl			ex	dp ch	2	1	85		1530	
IIIAg	rxsr	sc	fl		pr		SU on	4	2	3580			
IIIAg	rxsr	sc	fl		pr		h (ex) h SU	2	3	595			
IIIBk	ds	sc	fl			ex	h ch	2	1	60			
VBq3	da	sc	fl			ex	h ch	2	1	115			
VBq3	da	sc	fl			ex	h ch	2	1	80			
VIs5	sr-ef	sc	fl		pr		l? (ex)	2	1	870			
Ia-IId1	rf-rt	sc					BIC c (ex) t	2	1	40			
VBqt	dt	sc	fl				ch sh	3	1	150	1620		
IIIAh	dsr	sc	fl				SU (ex) on	3	1	330			
IIIBk	ds	sc	fl				sh	2	3	90			
IIIBk	ds	sc	fl				sh (ex)	3	1	75			
IIIAg	rxsr	sc	fl				SU (ex) on	2	1	535			
IIIAh	dsr	sc	fl				SU (ex)	3	2	210			
VBq3	da	sc	fl	hm			(ex) c sh	1	1	110			
VBq3	da	sc	fl	hm			(ex) ch sh	2	1	50			

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)			sc	fl	ot	cc age	(GENERAL NOTES)	#
				1	2	1	2	3			
3965	10665830	120	1279899621						60		
60	1885	4	7540						60		
770	81642	25	2041058						60	trb2	
60	2827	4	11310						60		
35	1100	4	4398						60		
80	1257	4	5027						12	trb1	
120	1885	4	7540						12	trb1	
45	1555	4	6220						12		
45	1414	4	5655						12		
	0	90	0						12		
40	1257	4	5027						15		
40	1257	4	5027						15		
40	1257	4	5027						15		
655	411550	70	28808472						15	Roundtop C	
750	294525	70	20616750						15	Roundtop C	
40	1257	4	5027						15		
40	1257	4	5027						15		
40	1257	4	5027						15		
85	8011	4	32044						60	trb1	
450	35343	4	141372						60	rd,Min C	
60	2827	4	11310						90		
50	1178	3	3534						60		
40	942	4	3770						60		
40	1100	4	4398						12		
40	1100	4	4398						12		
1040	865825	90	77924246						8	Mineral C	
60	4006	4	16022						8	Mineral C	
50	1964	4	7854						28		
50	1964	4	7854						28		
60	4006	4	16022						8	Mineral C	
3065	8617959	120	1034155030						18	Mineral C	
615	287397	50	14369875						50	trb1	
80	3770	4	15080						28	Mineral C	
40	3613	4	14451						28	Mineral C	
45	2827	4	11310						28	Mineral C	
745	509057	60	30543421						60		
700	21991	4	87965						60		
110	12959	4	51836						60		
450	116632	30	3498957						60	Min C,rd	
90	6362	4	25447						60		
90	5301	4	21206						60		
415	174378	20	3487569						20	Min C,rd	
370	61026	25	1525640						60	Min C,rd	
85	7343	4	29374						20		
30	1178	4	4712						20		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	23L22	*	Mineral C	1920	285	Tva		se			ss				165			
14 05E	23L23	*	Mineral C	2100	95	Tva		se			ds				165			
14 05E	23M1		Mineral C	2200	90	Tva		se			xs				106	165		
14 05E	23N20		Mineral C	2320	330	Tva		se			ss				165			
14 05E	23P20		Mineral C	2160	105	Tva		se			ds				165			
14 05E	23P21		Mineral C	2400	115	Tva		se			ds				165			
14 05E	23P22		Mineral C	2400	100	Tva		se			ds				165			
14 05E	23P23		Mineral C	2360	10	Tva		se			xs				165			
14 05E	24B1		Mineral C	3700	145	Tva		sse			ds				216	33	161	
14 05E	24B2		Mineral C	3340	200	Tva		sse			ds				216			
14 05E	24B3		Mineral C	3580	185	Tva		sse			ds				216			
14 05E	24C1		Mineral C	3350	150	Tva		sse			ds				32			
14 05E	24C20		Mineral C	3320	120	Tva		sse			xs				32			
14 05E	24F1		NF Mineral C	2820	190	Tva		sse			xs				160	161		
14 05E	24F2		Mineral C	3475	155	Tva		sse			ds				32	161	161	
14 05E	24G1		Mineral C	3200	120	Tva		sse			xs				32			
14 05E	24G20		Mineral C	3200	105	Tva		sse			xs				32			
14 05E	24J1	*	Mineral C	3200	250	Tva		sse			xs			pl?	160		162	
14 05E	24K1		Mineral C	2600	290	Tva		sse			xs				161			
14 05E	24L1		Mineral C	2820	135	Tva		sse			ds				160	161		
14 05E	25D20	*	Mineral C	1880	210	Tva		se	24		xs				162			
14 05E	25E1		Mineral C	2600	35	Tva		se	24		xs			pl?	164	165		
14 05E	25E2		Mineral C	2600	25	Tva		se	24		xs			pl?	165			
14 05E	25E20	*	Mineral C	2400	60	Tva		se	24		xs				165			
14 05E	25E21	*	Mineral C	2100	0	Tva		se	24		ss				165			
14 05E	25E3		Mineral C	2500	25	Tva		se	24		xs			pl?	165			
14 05E	25E4		Mineral C	2400	330	Tva		se	24	37	xs			pl?	165			
14 05E	25E5		Mineral C	2400	345	Tva		se	24	37	xs			pl?	165			
14 05E	25G1	*	Mineral C	2040	260	Tva		se	24	37	xs			pl?	164			
14 05E	25G2	*	Mineral C	2040	280	Tva		se	24	37	xs			pl?	165			
14 05E	25G20		Mineral C	1940	135	Tva		se	24		xs				165			
14 05E	25G3		Mineral C	2300	285	Tva		se	24	37	xs			pl?	164			
14 05E	25G4		Mineral C	2300	260	Tva		se	24	37	xs			pl?	164			
14 05E	25H1	*	Mineral C	2880	260	Tva		se	24	37	xs			pl?	164			
14 05E	25L1		Mineral C	2760	95	Tva		se	24	37	xs			pl?	165		12	
14 05E	25L20	*	Mineral C	2240	90	Tva		se	24		xs				165			
14 05E	25N1		Mineral C	3080	55	Tva		se	24	37	xs				32		71	70
14 05E	25N20		Mineral C	2720	120	Tva		se	24	37	xs				32			
14 05E	25N21		Mineral C	2960	110	Tva		se	24	37	xs				32			
14 05E	25N22		Mineral C	2880	100	Tva		se	24	37	xs				71	12		
14 05E	25N23		Mineral C	3000	30	Tva		se	24	37	xs				71			
14 05E	26C1		Mineral C	3060	90	Tva		e	25	45	ds				165			
14 05E	26C2		Mineral C	2700	55	Tva		e	25	45	ds				165			
14 05E	26C20		Mineral C	2680	345	Tva		e	25	45	xs				165			
14 05E	26C21		Mineral C	2800	0	Tva		e	25	45	xs				165			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBq3-VII	da-rd	sc	fl	hm		ex	dp	2	1	180			
VBq3-VII	da-cb	sc	fl			ex		2	1	40			
Ia-IId1	rf-rt	sc		hm			t rx c	1	1	60			
VBqt	dt	sc	fl			ex	ch dp sed	2	1	90			
VBq3-VII	da-sc	sc	fl			ex	dp	2	1	120			
VBq3	da	sc	fl			ex	ch	2	1	50			
VBq3	da	sc	fl			ex	ch	2	1	50			
VBq3-VII	da-sc	sc	fl				(ex) dp	2	1	120			
VIs5	sr-ef	sc	fl	hm			on	4	3	2700			
VBqt-VII	dt-sc	sc	fl	hm?			h ch(ex)sed	2	1	120		2360	
VBqt	dt	sc	fl	hm			ch sed (ex)	2	2	315		1295	
IIIAh	dsr	sc	fl				bg h sed?	2	2	630			
IIIBk-VII	ds-rd	sc	fl	hm		ex	ch	2	1	40			
VBq3-VII	da-sc	sc	fl	hm		ex	h (ex) sh	2	1	75	820		
IIIAg	rxsr	sc	fl				bg SU ?	3	3	1455			
IIIAg	rxsr	sc	fl				on hd SU	3	1	480			
IIIBk	ds	sc	fl			ex	hd	2	1	40			
VIs5	sr-ef	sc	fl				SU? i gft	4	2	2250	2985		
IIIBk	ds	sc	fl			ex	SU h	2	1	20			
IIIAg	rxsr	sc	fl				bg SU	3	2	550			
IIIBk-VII	ds-sc	sc	fl			ex	ch SU	1	1	30			
IIIAg	rxsr	sc	fl	hm?			SU hd on rej?	4	2	1430			
VBq3-VII	da	sc	fl			ex		2	1	70			
VBq3	da	sc	fl	hm		ex	ch SU	2	1	40			
VBq3	da	sc	fl	hm		ex	chSU	2	1	40			
VBqt	dt	sc	fl	hm?			h (ex) ch	2	1	80			
VBqt	dt	sc	fl			ex	h ch	2	1	75		145	
VBqt-VII	dt-ld	sc	fl			ex	dp ch	2	1	80		145	
IIIBk-VII	ds-rd	sc				ex	SU?	2	1	60			
IIIBk-VII	ds-rd	sc				ex	SU?	2	1	60			
VBq3	da	sc	fl			ex	ch	2	1	70			
IIIBk-VII	ds-sc	sc	fl			ex		2	1	20			
IIIBk-VII	ds-sc	sc	fl			ex	h	2	1	20			
IIIAg	rxsr	sc	fl				hd on SU	3	2	2245			
IIIAg	rxsr	sc	fl				hd SU l?	4	2	1675			
VBq3-VII	da-sc	sc	fl			ex	ch	1	1	60			
IIIAg	rxsr	sc	fl		pr		rej (ex) on l?	3	2	4775			
VBq3	da	sc	fl				(ex) ch	2	1	120			
VBq3	da	sc	fl	hm			(ex) ch	3	1	140			
IIIBk	ds	sc	fl				(ex)	2	1	100			
IIIBk	ds	sc	fl				(ex)	2	1	75			
VIs5	sr-ef	sc	fl		pr		l? on	4	2	2190	750		
IIIAg	rxsr	sc	fl		pr		on	4	2	2365			
VBq3	da	sc	fl				(ex) ch sh	2	1	60			
VBq3	da	sc	fl				(ex) ch sh	2	1	200			

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)			sc	fl	ot	cc age	(GENERAL NOTES)	#
				1	2	1	2	3			
330	46653	4	186611						20		
40	1257	4	5027						20		
2130	100374	10	1003741						8		
2130	150561	4	602245						20		
190	17907	4	71628						20		
50	1964	4	7854						20		
50	1964	4	7854						20		
250	23562	4	94248						20		
2475	5248436	120	629812260						60	trb1	
110	10367	4	41469						12	trb1	
195	48243	4	192973						12	trb1,rd	
395	195447	30	5863404						12	trb1,rd	
180	5655	4	22620						15		
40	2356	4	9425						23	Mineral C	
705	805644	40	32225747						23	trb1	
400	150797	40	6031872						15		
40	1257	4	5027						15		
2130	3764030	110	414043245						12	trb1	
20	314	4	1257						23	trb1	
355	153349	40	6133974						23	trb1,rd	
50	1178	4	4712						60		
2250	2527025	90	227432205						20	Mineral C	
50	2749	4	10996						20	Mineral C	
60	1885	4	7540						90		
60	1885	4	7540						8		
80	5027	4	20106						20	Mineral C	
20	1178	4	4712						20	Mineral C	
45	2827	4	11310						8	Mineral C	
655	30866	4	123465						15	Mineral C	
655	30866	4	123465						15	Mineral C	
30	1649	4	6597						8		
245	3848	4	15394						15	Mineral C	
285	4477	4	17907						15	Mineral C	
1430	2521409	90	226926800						15	Mineral C	
1550	2039095	70	142736633						20	Mineral C	
60	2827	4	11310						8		
6120	22951744	150	3442761630						20	Mineral C	
120	11310	4	45239						20		
100	10996	4	43982						20		
50	3927	4	15708						20		
125	7363	4	29453						20		
1260	2167233	10	21672328						5	Mineral C	
1735	3222712	10	32227122						20	Mineral C	
50	2356	4	9425						20		
150	23562	4	94248						20		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 05E	26C22		Mineral C	2680	60	Tva		e	25	45	xs				165			
14 05E	26E1		Washington C	2200	270	Tva		e	25	45	ss				160			
14 05E	26G20		Mineral C	2360	135	Tva		e	25	45	xs				165			
14 05E	26G21		Mineral C	2300	320	Tva		e	25	45	xs				165			
14 05E	26H1		Mineral C	2720	350	Tva		e	25	45	xs			pl	164			
14 05E	26K1		Mineral C	2860	75	Tva		e	25	45	ds				11	160		
14 05E	26L1		Washington C	2920	275	Tva		e	25	45	ss				11	160	126	
14 05E	26L20		Washington C	2480	260	Tva		e	25	45	ss				126			
14 05E	26P1		Washington C	3240	285	Tva		e	25		ss				32	160		
14 05E	27B20		Washington C	2800	30	Tva		e	25		xs				216	165		
14 05E	27C1		Washington C	3000	80	Tva	Tpg	e	25		ds				215		175	
14 05E	27C20		Roundtop C	3000	295	Tva		e	25		ss				215			
14 05E	27K1		Washington C	2630	150	Tva			25		xs				165	216		
14 05E	27N1		Roundtop C	2800	20	Tva		ene	25	75	xs			pl	215	216		
14 05E	27N2		Roundtop C	2800	20	Tva		ene	25	75	xs			pl	215			
14 05E	27P1		Roundtop C	3400	265	Tva		ene	25	75	ds				215			
14 05E	27R1		Washington C	2700	50	Tva		ene	25	75	xs				215			
14 05E	27R2		Washington C	2730	275	Tva		ene	25	75	ss				220			
14 05E	29C1		Roundtop C	2400	235	Tpg		sw	20	25	xs	fa			233			
14 05E	29C20		Roundtop C	2200	175	Tpg		sw	20	25	xs	fa			233			
14 05E	29D1		Roundtop C	2700	145	Tpg	Qls	sw	20	25	xs	fa			160		250	
14 05E	29D2		Roundtop C	2540	65	Tpg		sw	70	25	ss	fa			233			
14 05E	29D20		Roundtop C	2460	80	Tpg		sw	20	25	ss	fa			233			
14 05E	29D21		Roundtop C	2360	290	Tpg		sw	20	25	ds	fa			160			
14 05E	29D3		Roundtop C	2540	65	Tpg		sw	70	25	ss	fa			233			
14 05E	29D4		Roundtop C	2540	65	Tpg		sw	70	25	ss	fa			233			
14 05E	29F1		Roundtop C	2200	105	Tpg		sw	70	25	xs	fa			160	233	146	
14 05E	29M1		Roundtop C	2160	40	Tpg		sw	70	25	ss	fa			160			
14 05E	29N1		Roundtop C	2100	80	Tidi		sw	70	25	ds	fa			232			
14 05E	30A1		Summit C	2800	235	Tpg		nw	25		xs				233			
14 05E	30A2		Summit C	2700	295	Tpg		nw	25		xs				233			
14 05E	30B1		Summit C	3280	145	Tpg		nw	25	27	ss				219	220		
14 05E	30C1		Summit C	3000	185	Tva3		nw	27		xs				231			
14 05E	30C20		Summit C	3360	170	Tpg		nnw	27		xs				219	231		
14 05E	30H1		Summit C	2640	110	Tidi		nw	25	27	ss				233			
14 05E	30M20		Summit C	2900	40	Tpg		nw	25	27	xs				233			
14 05E	30N1		Summit C	3140	60	Tpg		nw	25	27	xs				179			
14 05E	30P20		Summit C	2800	105	Tpg		nw	25	27	xs				161			
14 05E	30R1		Tilton R	2900	140	Tpg		ese			ss	fa			230	231		
14 06E	05P1		NF Mineral C	3280	100	Tva		se			ds				31			
14 06E	05P2		NF Mineral C	3240	130	Tva		se			ds				39			
14 06E	06C1		NF Mineral C	2090	155	Tva		se			ds				164			
14 06E	06D1		NF Mineral C	2360	95	Tva		se			xs				165			
14 06E	06G1		NF Mineral C	2640	215	Tva		se			xs				164			
14 06E	06G2		NF Mineral C	2680	190	Tva		se			xs				161			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBq3-VII	da-ld	sc	fl				(ex) ch sh	2	1	120			
VBqt	dt	sc	fl				dp (ex)	3	1	100	100		
VBq3-VII	da-rd	sc	fl			ex	dp	2	1	200			
VBq3-VII	da-rd	sc	fl			ex	dp	2	1	150			
VIs5	sr-ef	sc	fl	hm			I SU	4	2	2290	1145		
IIIAg	rxsr	sc	fl		pr?		SU	4	3	1065			
VIs5	sr-ef	sc	fl	hm	pr		I SU on	3	1	1500	790		
VBqt-VII	dt-sc	sc					ch BIC	3	2	80			
IIIAg	rxsr	sc	fl		pr		SU I	3	2	1575			
IIIAg	rxsr	sc	fl				SU?	4	2	300			
VIs5	sr-ef	sc	fl	hm			gft	4	2	850	1233		
VBq3	da	sc	fl	hm			ch hd	3	2	70			
IIIBk-VII	ds-sc	sc	fl			ex	ch	2	1	80	120		
IIIBk	ds	sc					BIC ch	3	2	60			
IIIBk	ds	sc					BIC sh	3	3	60			
VBqf	df	sc	fl			ex	h dp	2	1	80	170		
IIIBk-VII	ds-sc	sc	fl			ex		2	2	60			
IIIBk-VII	ds-sc	sc	fl			ex	dp	2	1	45	55		
VBqf	df	sc	fl			ex	dp h	2	1	30			
IIIBk	ds	sc	fl				(ex) sh	2	1	45			
VIs5	sr-ef	sc	fl		pr?		I (ex) rej?	2	1	1695	960		
IIIBk-VII	ds-sc	sc	fl			ex		2	1	60	95		
VBq3-VII	da-sc	sc	fl				(ex) sh ch	2	1	75			
VBq3	da	sc	fl				(ex) sh ch	2	1	30			
IIIBk-VII	ds-sc	sc	fl			ex		2	1	60	70		
IIIBk-VII	ds-sc	sc	fl			ex		2	1	50	80		
VIs5	sr-ef	sc	fl				dp	4	2	660			
VBq3-VII	da-sc	sc	fl			ex	ch dp	2	1	40	115		
IIIBk-VII	ds-sc	sc	fl				sh dp (ex)	2	2	75	175		
IIIBk	ds	sc	fl				SU (ex)	2	1	90			
IIIBk	ds	sc	fl				SU (ex)	2	1	55	45		
VIs5	sr-ef	sc	fl		pr		on I	4	2	2136	1955		
VBq3	da	sc	fl				ch BIC (ex)dp	2	1	60		1115	
VBq3-VII	da-sc	sc	fl				(ex) ch sed	2	1	71			
IIIBk	ds	sc	fl				sh (ex) SU?	2	1	90			
VBqt	dt	sc	fl			ex	ch dp	1	1	70			
VBqt-VII	dt-sc	sc	fl			ex	ch dp	2	1	65			
IIIBk	ds	sc	fl			ex	ch dp	2	1	65			
VIs5	sr-ef	sc	fl	hm				4	3	1780			
VBqt	dt	sc	fl				h ch sh	3	2	400		220	
VBqt	dt	sc	fl				h ch sh	3	2	345		810	
VBq3-VII	da-rd	sc	fl			ex	dp sh	2	1	120	200		
VIs5	sr-ef	sc	fl	hm?			hw I?	3	3	1000			
IIIAg	rxsr	sc	fl	hm			bg I?	4	4	1215			
IIIBk	ds	sc				ex	sh	3	2	100			

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
110	10367	4	41469						20		
100	7854	4	31416						20	Washington C	
1020	160222	4	640886						20		
1000	117810	4	471240						20		
670	1205039	80	96403138						20	Mineral C	
1655	1384326	60	83059584						17	Mineral C	
1970	2320857	110	255294270						20	Washington C	
80	5027	4	20106						20		
550	680353	75	51026456						20	Washington C	
250	58905	50	2945250						8		
1110	741025	90	66692241						18	trb1	
60	3299	8	26389						12		
40	2513	4	10053						15	trb1	
100	4712	4	18850						15		
100	4712	4	18850						15		
35	2199	4	8796						5	trb1	
120	5655	4	22620						15	trb1	
35	1237	4	4948						15	trb2	
20	471	4	1885						17	trb1	
60	2121	4	8482						60		
1135	1510972	95	143542355						17	Summit C	
125	5891	4	23562						17	trb1	
80	4712	4	18850						17		
35	825	4	3299						17		
85	4006	4	16022						17	trb1	
60	2356	4	9425						17	trb1	
615	318794	90	28691447						60	trb2	
25	785	4	3142						17		
75	4418	4	17672						14	Summit C	
110	7775	4	31102	36					30	trb1	4
60	2592	4	10367	39					30	trb1	3
3380	5670337	120	680440401	33	20				12		x
60	2827	4	11310	47					18	Summit C	
100	5576	4	22305						18	Summit C	x
300	21206	4	84823	45	36				40	trb1	3
70	3848	4	15394						10		
45	2297	4	9189						50		
45	2297	4	9189						16		
1710	2390601	90	215154047	20	18				25	Tilton R	4
195	61261	4	245045						30	trb1	
205	55547	4	222190						30	trb1	
180	16965	4	67859						40	rd	
80	62832	60	3769920						40		
1015	968575	90	87171742						40	trb1	
280	21991	4	87965						40		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 06E	06J1		NF Mineral C	3400	320	Tva		se			ss				15			
14 06E	06K1		NF Mineral C	2840	180	Tva		se			ds				15			
14 06E	06K2		NF Mineral C	2800	305	Tva		se			ss				15		165	
14 06E	06P1		NF Mineral C	2240	295	Tva		se			ss				12	15		
14 06E	06P2		NF Mineral C	2500	270	Tva		se			ss				165			
14 06E	06Q1		NF Mineral C	3320	225	Tva		se			ss				15			
14 06E	06R1		NF Mineral C	3300	305	Tva		se			ss				15			
14 06E	06R2		NF Mineral C	3300	255	Tva		se			ss				32			
14 06E	06R3		NF Mineral C	3200	285	Tva		se			ss				15			
14 06E	07B1		NF Mineral C	3100	255	Tva		se			xs			pl	15			
14 06E	07B2		NF Mineral C	3200	345	Tva		se			ss				15			
14 06E	07B20		NF Mineral C	3320	300	Tva		se			ss				15			
14 06E	07B3		NF Mineral C	3360	260	Tva		se			xs				15			
14 06E	07C1		NF Mineral C	3280	255	Tva		se			xs			pl	165			
14 06E	07C2		NF Mineral C	2900	320	Tva		se			ss				165			
14 06E	07C20		NF Mineral C	2800	210	Tva		se			ss				15			
14 06E	07C21		NF Mineral C	2700	250	Tva		se			ss				12			
14 06E	07C3		NF Mineral C	2920	320	Tva		se			ss				165			
14 06E	07C4		NF Mineral C	2700	235	Tva		se			xs			pl	165			
14 06E	07D1		NF Mineral C	3160	305	Tva		se			ss				165			
14 06E	07F1		NF Mineral C	3080	225	Tva		se			xs			pl	12	165		
14 06E	07N1		NF Mineral C	1960	215	Tva	Qdh	se			xs				25			
14 06E	07N20		NF Mineral C	1920	245	Tva	Qdh	se			xs			pl	16			
14 06E	08D1		NF Mineral C	3100	115	Tva		se			ds				13		12	
14 06E	08D2		NF Mineral C	3120	200	Tva		se			xs			pl	32			
14 06E	08D3		NF Mineral C	3200	160	Tva		se			ds				32			
14 06E	08D4		NF Mineral C	3200	115	Tva		se			ds				32	12		
14 06E	08E1		NF Mineral C	3200	125	Tva		se			ds				12	72		
14 06E	08E2		NF Mineral C	2900	125	Tva		se			ds				12	72		
14 06E	08F1		NF Mineral C	3040	145	Tva		se			ds				25	15		
14 06E	08L1		NF Mineral C	2440	130	Tva		se			ds				181			
14 06E	08L20		NF Mineral C	2400	125	Tva		se			xs				181			
14 06E	08L21		NF Mineral C	2400	145	Tva		se			xs				181			
14 06E	08M1		NF Mineral C	3040	135	Tva		se			ds				12	106		
14 06E	08P1		NF Mineral C	2500	270	Tva		se			xs				12	25		
14 06E	08P2		NF Mineral C	2500	280	Tva		se			ss				161			
14 06E	08R1		NF Mineral C	3600	310	Tva		se			ss				33			
14 06E	09E20		NF Mineral C	3520	250	Tva		se			ds				40			
14 06E	09E21		NF Mineral C	3240	120	Tva		se			ds				40			
14 06E	09E22		NF Mineral C	3500	220	Tva		se			ds				40		181	
14 06E	17A1		NF Mineral C	3800	255	Tva		sse			xs			pl	39	32		
14 06E	17B1		NF Mineral C	2960	205	Tva		sse			ds				165			
14 06E	17D1		NF Mineral C	2400	275	Tva		sse			xs				25			
14 06E	17F1		NF Mineral C	2560	245	Tva		sse			xs				25			
14 06E	17F2		NF Mineral C	2560	135	Tva		sse			ds				165			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
Ia-IId1	rf-rt	sc				ex	sh t c	1	1	40	340		
IIIBk	ds	sc	fl			ex	sh ch	2	1	140	320		
IIIAg	rxsr	sc	fl			ex	l?	3	2	120	280		
VIs5	sr-ef	sc	fl	hm	pr		l	2	2	1080			
IIIBk	ds	sc					sh (ex) SU	2	1	50			
VBq3	da	sc	fl			ex	c sh t dp	3	1	150	300		
IIIAg	rxsr	sc	fl				h dp l	3	3	1080	880		
VBqt	dt	sc	fl				bg ch	3	1	150	1200		
IIIAg	rxsr	sc	fl				sh bg hd	2	3	1200			
IIIAh	dsr	sc	fl				sh (ex) hd on	2	1	400	240		
VBq3	da	sc	fl				sh hw ch	3	1	240	320		
VBq3	da	sc	fl				hw ch	3	2	200			
IIIAh	dsr	sc	fl				bg hw	3	2	600			
IIIAg	rxsr	sc	fl				sh on	3	3	460			
VBq3	da	sc	fl				sh ch hw	3	2	180			
IIIBk	ds	sc	fl				sh ch (ex)	3	2	60			
VBq3	da	sc	fl				sh ch	3	2	80			
VBq3	da	sc	fl				sh ch	2	2	200			
VBq3	da	sc	fl				sh ch	3	3	110			
VIs5	sr-ef	sc	fl	hm	pr			3	2	960			
VIs5	sr-ef	sc	fl				i SU on	4	2	3100			
IIIAh	dsr	sc	fl				hw l SU	3	2	810			
VBq3	da	sc	fl				(ex) hw ch	3	2	80			
VIs5	sr-ef	sc	fl				bg	4	3	1300			
VBqt	dt	sc	fl				BIC sh ch	2	1	255		295	1865
VBqt	dt	sc	fl				BIC sh ch	3	1	125		275	
VBqt	dt	sc	fl				BIC sh ch	3	1	125		210	
VBq3	da	sc	fl				hw sh dp ch h	3	1	225	505		
VBq3	da	sc	fl				hw sh dp ch h	3	1	325			
IIIAg	rxsr	sc?	fl?				(ex)? l? BIC	1	4	850			
VBq3	da	sc	fl				ch (ex) hw	3	1	80	340		
VBq3	da	sc	fl				ch	3	1	60			
Ia-IId1	rf-rt	sc				ex	c t	2	1	60			
IIIBk	ds	sc	fl				BIC Sh ch L?	3	3	550	340		
IIIBk-VII	ds-cb	sc					BIC ch (ex)	2	2	165	160		
VBqt-VII	dt-sc	sc	fl				ch	2	2	80		635	
VIs5	sr-ef	sc	fl				dp? l? bg?	4	3	1570	1270		
IIIAg	rxsr	sc	fl	hm			on SU	2	2	720			
VBq3	da	sc	fl	hm?		ex	ch	2	1	100			
VBq3	da	sc	fl			ex	ch	2	1	90			
VIs5	sr-ef	sc	fl		pr		l SU? l on	4	1	3215	1985		
IIIBk	ds	sc	fl			ex	sh SU	1	2	220			
IIIBk	ds	sc	fl				hw	3	2	280			
IIIBk	ds	sc	fl				hw sh SU	3	1	60			
IIIBk	ds	sc					SU (ex) hw	2	1	50	240		

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)			sc	fl	ot	cc age	(GENERAL NOTES)	#
				1	2	1	2	3			
800	25133	4	100531						40		
320	35186	4	140744						40	trb1	
280	26389	50	1319472						40		
1200	1017878	90	91609056						40		
680	26704	4	106814						40	trb1	
520	61261	4	245045						40		
520	441081	4	1764323						40	trb2	
135	15904	4	63617						40	trb1	
603	568315	60	34098926						40		
380	119381	15	1790712						40		
140	26389	4	105558						40	trb1	
180	28274	4	113098						40		
420	197921	30	5937624						40	trb1	
1200	433541	60	26012448						40	trb1	
150	21206	4	84823						40	trb1	
200	9425	4	37699						40		
75	4712	4	18850						40		
150	23562	10	235620						40	trb1	
110	9503	10	95033						40	trb1	
960	723825	70	50667725						40		
3150	7669431	100	766943100						40	Mineral C	
1075	683887	60	41033223						40	NF Min C,rd	
80	5027	4	20106						40		
2070	2113511	90	190216026						30	NF Min C	
100	20028	4	80111						30	trb1	
100	9818	4	39270						30	trb1	
100	9818	4	39270						30	trb1	
160	28274	4	113098						40	trb1	
205	52327	4	209309						40		
485	323781	30	9713435						40	rd	
80	5027	4	20106						40	NF Min C	
60	2827	4	11310						40		
2370	111684	4	446736						40		
290	125271	4	501085						30	rd	
40	5184	4	20735						40		
85	5341	4	21363						40	NF Min C	
975	1202251	80	96180084						40	NF Min C	
630	356257	4	1425030						40		
90	7069	4	28274						40		
90	6362	4	25447						40		
1825	4608236	100	460823633						20	NF Min C	
530	91578	25	2289441						40	rd,trb1	
240	52779	4	211116						40		
220	10367	4	41469						40	trb1	
220	8639	4	34558						40	trb1	

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 06E	17G1		NF Mineral C	2700	275	Tva		sse			xs				165			
14 06E	17G2		NF Mineral C	2760	270	Tva		sse			xs				165			
14 06E	17H1		NF Mineral C	3400	275	Tva		sse			xs			pl	32	72		
14 06E	17H2		NF Mineral C	3280	275	Tva		sse			xs			pl	72		32	
14 06E	17K1		NF Mineral C	2600	210	Tva	Qdh	sse			xs			pl	14			
14 06E	17K2		NF Mineral C	2880	160	Tva		sse			xs				14	12		
14 06E	17K20		NF Mineral C	2340	130	Tva		sse			xs				15			
14 06E	17K21		NF Mineral C	2340	205	Tva		sse			xs				15			
14 06E	17K22		NF Mineral C	2260	310	Tva		sse			xs				15			
14 06E	17K23		NF Mineral C	2800	160	Tva		sse			xs				12			
14 06E	17M1		NF Mineral C	2200	180	Tva		sse			ds				12	25		
14 06E	17P1		NF Mineral C	2300	285	Tva		sse			ss				13			
14 06E	17Q1		NF Mineral C	2800	285	Tva		sse	14		ss				12			
14 06E	17Q2		NF Mineral C	2800	225	Tva		sse			xs			pl?	13	15		
14 06E	17R1		NF Mineral C	2880	210	Tva		sse			xs			pl?	15			
14 06E	17R20		NF Mineral C	2800	170	Tva		sse			ds				13			
14 06E	18B1		NF Mineral C	2600	205	Tva		se			xs			pl	161			
14 06E	18B20		NF Mineral C	2480	180	Tva		se			ds				11	25	14	
14 06E	18C1		NF Mineral C	2000	275	Tva		se			xs			pl	25			
14 06E	18E1		NF Mineral C	2400	55	Tva	Qdh	se			xs			pl?	161	165		
14 06E	18E20		NF Mineral C	2040	190	Tva	Qdh	se			xs				12			
14 06E	18G1		NF Mineral C	2160	195	Tva		se			xs				12			
14 06E	18G2		NF Mineral C	2100	215	Tva		se			xs				25			
14 06E	18G3		NF Mineral C	2300	215	Tva		se			xs			pl	14			
14 06E	19E1		NF Mineral C	3480	70	Tva		se			xs				15			
14 06E	19E2		NF Mineral C	3400	25	Tva		se			xs				15			
14 06E	19E3		NF Mineral C	3220	5	Tva		se			xs				32			
14 06E	19F1		NF Mineral C	3100	50	Tva		se			xs			pl	24			
14 06E	19L1		NF Mineral C	3600	30	Tva		se			xs			pl	33	32		
14 06E	19N20		Mineral C	3260	240	Tva		se			xs			pl	72	14	160	
14 06E	19Q1		Mineral C	3100	265	Tva		ese			xs			pl	33	12		
14 06E	19R1		Mineral C	3600	225	Tva		ese			xs			pl	33		12	
14 06E	20A1		Mineral C	2850	230	Tva	Toh	ese	14		xs				165			
14 06E	20B1		Mineral C	2760	150	Tva		ese	14		xs				165			
14 06E	20B2		Mineral C	2240	215	Tva		ese	14		xs				165		13	
14 06E	20F1		Mineral C	2500	170	Tva		ese	14	30	ds				165			
14 06E	20H1		Mineral C	2260	180	Tva		ese	14	30	xs			pl	165			
14 06E	20H2		Mineral C	2600	195	Tva		ese	14	30	xs			pl	165			
14 06E	20H20		Mineral C	2340	265	Tva	Toh	ese	14	30	xs				13			
14 06E	20H3		Mineral C	2260	240	Tva	Toh	ese	14	30	xs				165			
14 06E	20L1		Mineral C	3000	20	Tva		ese	14	30	xs			pl	165			
14 06E	20L2		Mineral C	2700	40	Tva		ese			ds				165			
14 06E	20L20		Mineral C	2840	50	Tva		ese	14	30	xs				15			
14 06E	20L21		Mineral C	2440	70	Tva		ese	14	30	xs				15			
14 06E	20L22		Mineral C	2360	65	Tva		ese	14	30	xs				15			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
IIIBk	ds	sc	fl				sh SU (ex)	2	1	85			
VBqt	dt	sc					ch hw (ex) SU	3	1	85		1190	
VIs5	sr-ef	sc	fl		pr		I SU? I on	4	2	2185	3135		
VBq3	da	sc	fl				sh hw dp SU?	3	1	475	595		
IIIAh	dsr	sc	fl				sh hw SU on	3	2	615	325		
VIs5	sr-ef	sc	fl	hm			on SU	3	3	1200			
VBq3	da	sc	fl				ch SU	2	1	40			
VBq3	da	sc	fl				ch SU	2	1	40			
VBq3	da	sc	fl				ch SU	2	1	140			
VBq3	da	sc				ex		2	1	80			
VBq3	da	sc	fl				hw ch sh	3	1	180			
IIIBk-VII	ds-cb	sc	fl				(ex)	3	1	115			
IIIAg	rxsr	sc	fl		pr		on SU	4	3	2005			
IIIBk	ds	sc	fl				sh hw SU	3	1	180			
IIIBk	ds	sc	fl				sh hw (ex) SU	2	1	120			
IIIBk	ds	sc					ch (ex)	2	1	80			
VBqt	dt	sc	fl				af(ex)dphw sh	3	1	525		1420	
VIs5	sr-ef	sc	fl		pr		on I SU	3	2	1470	720		
VBq3	da	sc	fl				SU hw h ch I	3	1	210	840		
IIIAh	dsr	sc	fl				SU hw hd	3	2	400			
VBqt-VII	dt-sc	sc	fl			ex	ch af	2	1	50			
IIIBk-VII	ds-cb	sc	fl				hw BIC hd	2	1	160			
IIIAh	dsr	sc	fl				dp? (ex) hw	3	1	365			
IIIBk	ds	sc	fl				dp (ex) sh	3	1	120	75		
VBq3	da	sc	fl			ex	ch h dp	2	1	40	360		
VBq3	da	sc	fl			ex	ch h dp	2	1	40	420		
IIIBk-VII	ds-sc	sc	fl			ex	dp ch	2	1	40	75		
VIs5	sr-ef	sc	fl				I wt	3	1	1330	1140		
VIs5	sr-ef	sc	fl				on hd	4	2	2660			
VIs5	sr-ef	sc	fl				on	4	2	2160			
IIIAg	rxsr	sc	fl				bg SU?	3	1	570			
VIs5	sr-ef	sc	fl				on I	4	2	1900			
IIIAg	rxsr	sc	fl		pr		on SU?	4	1	2045			
IIIBk	ds	sc	fl				dp? (ex)	3	2	125	125		
VBq3	da-sc	sc				ex	SU?	2	1	40	125		
IIIBk	ds	sc	fl			ex	SU	2	2	90			
IIIBk-VII	ds-sc	sc	fl				hw ch	3	1	125	165		
IIIAg	rxsr	sc	fl				SU on	3	2	860			
VBq3	da	sc	fl				ch hw	3	1	80			
VBq3-VII	da-rd	sc	fl				sh hw	3	1	240			
IIIAg	rxsr	sc	fl				h on SU?	3	4	1430			
VBqt	dt	sc	fl			ex	ch h	2	1	325	1430		
IIIAg	rxsr	sc	fl				SU on	4	2	1440			
VBqt	dt	sc	fl				ch	3	2	80			
VBqt	dt	sc	fl				ch	3	2	80			

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
85	5675	4	22698						40	trb1	
85	5675	4	22698						40	trb1	
1350	2316734	90	208506029						40	NF Min C	
355	132438	4	529752						40	NF Min C	
530	256001	30	7680034						40	trb1	
1900	1790712	70	125349840						40		
40	1257	4	5027						40		
40	1257	4	5027						40		
1470	161635	4	646541						40		
60	3770	4	15080						40		
80	11310	4	45239						40	NF Min C	
185	16709	4	66838						40	rd	
1065	1677084	90	150937583						30	NF Min C	
80	11310	4	45239						40	trb1	
125	11781	4	47124						40	trb	
60	3770	4	15080						40		
225	92775	4	371102						40	NF Min C,rd	
2160	2493802	80	199504166						40		
170	28039	4	112155						40	Mineral C	
690	216770	20	4335408						60	NF Min C,rd	
50	1964	4	7854						40		
150	18850	4	75398						40	NF Min C,rd	
245	70234	15	1053516						40	NF Min C,rd	
115	10839	4	43354						40		
10	314	4	1257						5		
70	2199	4	8796						5		
10	314	4	1257						5		
1520	1587765	90	142898818						5		
5320	11114352	130	1444865822						5		
2160	3664362	90	329792602						5		
835	373811	40	14952445						5		
1900	2835294	90	255176460						5		
2660	4272340	90	384510634						30		
100	9818	4	39270						30	Mineral C	
350	10996	4	43982						30	trb2	
450	31809	4	127235						30	trb2	
90	8836	4	35343						30	Min C,rd	
450	303950	50	15197490						30	Min C,rd	
60	3770	4	15080						30		
145	27332	4	109328						30	Min C,rd	
735	825495	50	41274734						30	Mineral C	
285	72748	4	290991						25	Mineral C	
1410	1594676	75	119600712						30		
70	4398	4	17593						30		
70	4398	4	17593						30		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
14 06E	20N1		Mineral C	3680	5	Tva		ese			xs			pl	165			
14 06E	20N2		Mineral C	3600	25	Tva		ese			xs				165			
14 06E	20P20		Mineral C	2940	80	Tva		ese	14	30	ds				25			
14 06E	20R1		Mineral C	2800	315	Tva		se	30	35	ss			pl	15			
14 06E	20R2		Mineral C	2350	40	Tva	Toh	se	30	35	xs				15			
14 06E	21L1		Mineral C	2650	215	Toh		se	30	35	xs				14			
14 06E	21L2		Mineral C	3160	225	Toh		se	30	35	xs			pl	181		14	11
14 06E	21L20		Mineral C	2800	310	Toh		se			ss				181			
14 06E	21L21		Mineral C	2680	120	Toh		ese	14	30	ds				165			
14 06E	21M1		Mineral C	2600	235	Toh		se	30	35	xs				181	165		
14 06E	21M2		Mineral C	2500	220	Toh		se	30	35	xs				181		165	
14 06E	21M3		Mineral C	2420	230	Toh		se	30	35	xs				181		165	
14 06E	21N1		Mineral C	2760	25	Toh		se	35		xs				181		165	
14 06E	21N2		Mineral C	2140	215	Toh		se	35		xs				11	165		
14 06E	29A1		NF Mineral C	3040	40	Tva	Toh	se			xs			pl	15	12	24	165
14 06E	29A2		NF Mineral C	3000	325	Tva		se			ss				15			
14 06E	29A20		NF Mineral C	2700	320	Tva		se			ss				15			
14 06E	29A21		NF Mineral C	2720	260	Tva		se			ss				15			
14 06E	29B1		NF Mineral C	2700	135	Tva		se			ds				15			
14 06E	29D1		NF Mineral C	3160	265	Tva		se			xs				32			
14 06E	29F1		NF Mineral C	3200	65	Tva		se			xs				165			
14 06E	29F2		NF Mineral C	3200	355	Tva		se			xs				165			
14 06E	29G1		NF Mineral C	2900	245	Tva		se			xs				165			
14 06E	29H1		NF Mineral C	3500	240	Tva		se			ss				33	32	13	
14 06E	29H20		NF Mineral C	3400	300	Tva		se			ss				13			
14 06E	29K2		Mineral C	3540	205	Tva		se			xs				72	32	11	12
14 06E	30B1		Mineral C	2800	210	Tva		se			xs				13			
14 06E	30F1		Mineral C	2480	125	Tva		se			ds				13			
14 06E	30F20		Mineral C	2840	295	Tva		se			ss				165	12		
14 06E	30Q20		Mineral C	2840	320	Tva		se			ss				12			
14 06E	30Q21		Mineral C	2860	310	Tva		se			ss				13			
15 05E	15N1		Nisqually R	2600	220	Qdh	Qls				ds				52			
15 05E	15N20		Nisqually R	2200	180	Tva					xs				52			
15 05E	16A1		Nisqually R	2900	205	Tva					xs				52			
15 05E	16B1		Nisqually R	2600	150	Qdh	Qls				xs			pl?	52			
15 05E	16F1		Nisqually R	2400	130	Qdh	Qls				xs				52			
15 05E	16R1		Nisqually R	2400	250	Qdh	Qls				ds				52			
15 05E	16R2		Nisqually R	2600	220	Qdh	Qls				ds				52			
15 05E	19A1		Alder Lake	2100	210	Qdh		sw/ne			xs				195			
15 05E	19A2		Alder Lake	1640	225	Qdh					xs				195			
15 05E	19A3		Alder Lake	1700	230	Qdh					xs				195			
15 05E	19B1		Alder Lake	1600	185	Qdh					xs				195			
15 05E	19B2		Alder Lake	1400	190	Qdh					xs				195			
15 05E	19N1		Alder Lake	1640	35	Tva3					xs				7			
15 05E	19N2		Alder Lake	1640	25	Tva3					xs				40			

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
IIIAg	rxsr	sc	fl				h on	2	4	1470			
VBq3	da	sc	fl				ch dp (ex)	3	1	210	230		
VBqt	dt	sc	fl				ch (ex)	2	2	80			
IIIAg	rxsr	sc	fl				SU bg	3	2	460			
IIIAh	dsr	sc	fl				SU bg	3	2	385			
VBq3	da	sc	fl				sh dp (ex)	3	1	245			
VIs5	sr-ef	sc	fl				SU? (ex) on	4	2	1540			
VBq3	da	sc	fl			ex		2	1	200			
IIIBk	ds	sc	fl				(ex)	2	1	80			
IIIAg	rxsr	sc	fl				on (ex) SU? I	2	1	580			
IIIBk-VII	ds-cb	sc	fl			ex		2	1	115			
IIIBk-VII	ds-cb	sc	fl			ex	dp sh	2	1	155	115		
IIIAg	rxsr	sc	fl	hm			SU (ex) I	3	1	965			
IIIAh	dsr	sc	fl				SU (ex) I sed	2	1	195			
IIIAg	rxsr	sc	fl	hm			on SU hd rej?	3	1	1545			
IIIAg	rxsr	sc	fl				on rej?	3	2	580			
IIIBk	ds	sc					(ex)	3	2	70			
IIIBk	ds	sc				ex	ch sed	2	1	90			
IIIAg	rxsr	sc	fl				bg (ex) rej?	3	2	385			
VBq3	da	sc	fl				ch (ex)	3	3	180			
VBqt	dt	sc	fl				ch h (ex) sed	2	1	80			
VBqt	dt	sc	fl				ch h (ex) sed	2	1	75			
IIIBk	ds	sc	fl				SU (ex) on	2	1	60			
IIIAg	rxsr	sc	fl	hm?	pr		SU on	3	2	1310			
VBqt	dt	sc	fl				ch BIC	3	2	60			
VIs5	sr-ef	sc	fl	hm			dp I	4	2	1545	4600		
IIIBk	ds	sc	fl				(ex) dp	2	1	105	150		
IIIBk	ds	sc	fl				sh I dp (ex)	2	1	35			
IIIAg	rxsr	sc	fl				hd SU	3	2	270			
IIIAg	dsr	sc	fl				hd	3	2	720			
IIIAg	dsr	sc	fl				hd	3	2	840			
IIIBk	ds	sc	fl				(ex)	2	2	360			
VBq3	da							2	2	90			
IIIBk	ds	sc	fl				ch BIC (ex)	2	1	90	400		
VIs5	sr-ef	sc	fl		pr		on	4	1	3920	3970		
IIIBk	ds	sc	fl			ex	BIC dp	3	2	90			
VBq3	da	sc	fl				ch sh	3	2	60	440		
VBq3	da	sc	fl				ch sh	3	2	80	520		
VIs5	sr-ef	sc	fl				on	3	2				
VBq3-VII	da-sc	sc	fl				(ex) ch BIC	2	1	75	530		
IIIBk	ds	sc	fl				bg ch	3	2	175			
IIIBk	ds	sc	fl				dp ch (ex)	2	1	80	205		
IIIBk-VII	ds-rd	sc	fl				dp ch (ex)	3	1	165	285		
IIIAg	rxsr	sc	fl				on	3	3	1265			
VBq3	da	sc	fl				BIC ch?	3	3	80			

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
1470	1697171	70	118801960						30		
155	25565	4	102259						30		
80	5027	4	20106						30		
760	274576	50	13728792						30	trb2	
770	232832	50	11641592						30	Min C,rd	
185	35598	4	142393						30	rd	
735	888994	80	71119541						30	Mineral C	
1200	188496	4	753984						30		
120	7540	4	30159						30		
1700	774404	80	61952352						30	Min C,rd	
195	17613	4	70450						30	Min C,rd	
195	23739	4	94955						30	Min C,rd	
695	526748	60	31604889						30	Min C,rd	
540	82703	30	2481079						30	Min C,rd	
1930	2341945	100	234194499						30	NF Min C	
1735	790348	75	59276102						30	trb2	
930	51130	4	204518						30		
90	6362	4	25447						30		
210	63500	20	1269992						30	trb2	
260	36757	4	147027						60	trb1 rd	
45	2827	4	11310						30	trb1	
75	4418	4	17672						30	trb1	
425	20028	4	80111						30	trb1	
1160	1193494	60	71609630						30	trb1	
60	2827	4	11310						30		
2780	3373372	90	303603439						30	Min C,rd	
75	6185	4	24740						18	trb1	
110	3024	4	12095						18		
480	101788	40	4071514						18		
330	186611	40	7464442						5		
720	475010	40	19000397						5		
830	234678	10	2346775						40		
90	6362	4	25447						40		
110	7775	4	31102						40		
90	277089	120	33250694						40		
90	6362	4	25447						40		
60	2827	4	11310						40		
70	4398	4	17593						40		
	0	90	0						60		
50	2945	40	117810						24		
175	24053	6	144317						60		
40	2513	4	10053						24		
120	15551	4	62204						24		
1105	1097852	90	98806658						60		
80	5027	4	20106						60		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																			
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
15 05E	19R1		Alder Lake	1440	30	Tva3	Qdh				xs				10			
15 05E	20D1		Alder Lake	1640	175	Qdh					xs				195			
15 05E	20E1		Alder Lake	1500	200	Qdh					xs				195			
15 05E	20E2		Alder Lake	1640	195	Qdh					xs				195			
15 05E	20E20		Alder Lake	1400	235	Qdh					xs				195			
15 05E	20E21		Alder Lake	1280	200	Qdh					xs				195			
15 05E	20E22		Alder Lake	1360	210	Qdh					xs				195			
15 05E	20E23		Alder Lake	1300	210	Qdh					xs				195			
15 05E	20E24		Alder Lake	1500	200	Qdh					xs				195			
15 05E	20E25		Alder Lake	1400	195	Qdh					xs				195			
15 05E	22A1		Nisqually R	2600	200	Tva					ds				195			
15 05E	22B1		Nisqually R	2000	270	Qls	Qdh				ds				195			
15 05E	22D1		Nisqually R	2280	215	Qdh	Tva				ds				195			
15 05E	22D20		Nisqually R	2400	210	Tva					ds				195			
15 05E	22G1		Nisqually R	1700	130	Qls	Qdh				xs				195			
15 05E	22P1		Nisqually R	1280	205	Qls	Qdh				ds				195			
15 05E	22Q1		Nisqually R	1400	205	Qls	Qdh				ds				195			
15 05E	23A1		Nisqually R	3000	225	Tva					xs				52			
15 05E	23A20		Nisqually R	2560	170	Tva					ds				52			
15 05E	23A21		Nisqually R	2640	140	Tva					ds				52			
15 05E	23C1		Nisqually R	2400	210	Tva					xs				52			
15 05E	23C2		Nisqually R	2600	245	Tva					xs				52			
15 05E	23F1		Nisqually R	2280	220	Tva					xs				52			
15 05E	23F20		Nisqually R	2220	255	Tva					xs				52			
15 05E	23G1		Nisqually R	2400	220	Tva					xs				52			
15 05E	23G2		Nisqually R	2600	210	Tva					xs				52			
15 05E	23G20		Nisqually R	2560	180	Tva					xs				52			
15 05E	23G21		Nisqually R	2500	165	Tva					xs				52			
15 05E	24K1		Nisqually R	2200	135	Tva					xs	fa?			160			
15 05E	24M1		Nisqually R	2600	175	Tva					xs				160			
15 05E	24N1		Nisqually R	2400	230	Tva					xs				160			
15 05E	24R1		Nisqually R	1680	185	Tva					xs	fa			160			
15 05E	27J1		Nisqually R	1560	15	Tva3	Qdh				ss				123	146		
15 05E	27M1		Nisqually R	1600	340	Tva3	Qdh				ss				123	92		
15 05E	30C1		Alder Lake	1520	45	Tva3					xs				146			
15 05E	31C1		Pleasant V	1880	280	Tva3					xs				147			
15 05E	31D1		Pleasant V	1360	250	Qdhd					ds				146	50		
15 05E	31F1		East C	2180	260	Qdhd					xs				146			
15 05E	31G1		Pleasant V	2000	165	Qdhd					xs			pl?	146	251		
15 05E	31G2		Pleasant V	2100	145	Qdhd					xs			pl?	146	147		
15 05E	31H1		Pleasant V	2100	275	Qdhd					xs				251			
15 05E	31L1		Pleasant V	1800	245	Qdhd					xs				147			
15 05E	32J1		East C	1600	280	Qdh	Tva3				ss				146			
15 05E	32J2		East C	1560	310	Qdh	Tva3				ss				147	50		
15 05E	32J20		East C	1480	315	Qdh	Tva3				ss				147			

a

GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
IIIAh	dsr	sc	fl				l	3	2	695			
VBq3-VII	da-sc	sc	fl				sh (ex) ch	2	1	80	80		
IIIAh	dsr	sc	fl				sh on hd	2	2	370			
VBqf	df	sc	fl				sh ch hw	3	2	185	655		
IIIBk	ds	sc	fl	hm		ex	BIC sh	2	1	20			
IIIBk-VII	ds-cb	sc	fl	hm			(ex) sh	2	2	30			
IIIBk-VII	ds-cb	sc	fl	hm			BIC (ex) sh	2	1	60			
IIIBk-VII	ds-cb	sc	fl			ex	BIC sh	2	1	50			
VBq3-VII	da-sc	sc	fl				(ex) ch sh	2	1	50			
VBq3	da	sc	fl				(ex) ch sh	2	1	50			
IIIBk	ds	sc	fl		BIC		(ex) ch sh	3	1	250	400		
VIs5	sr-ef	sc	fl		pr		l i on	2	1	2460	1760		
IIIAh	dsr	sc	fl		pr	ex	l BIC on	2	1	700	200		
IIIBk	ds	sc	fl			ex		2	1	120			
VBqt	dt	sc	fl	hm			ch (ex) BIC	3	2	120		615	
IIIBk	ds	sc	fl	hm?			(ex)	2	1	85			
IIIBk-VII	ds-sc	sc	fl	hm			(ex) ch sh	2	1	110	150		
IIIAg	rxsr	sc	fl				bg ch (ex) h	4	4	775			
VBq3	da	sc	fl	hm			(ex) sh ch	2	1	50			
VBq3	da	sc	fl	hm			(ex) sh ch	2	1	110			
VBq3	da	sc	fl			ex	bg h	2	1	200		2120	
VBqt	dt	sc	fl				bg ch h	3	2	290		1835	
IIIAg	rxsr	sc	fl				SU (ex) on	3	2	490			
IIIBk	ds	sc	fl			ex		2	1	80			
VBq3	da	sc	fl				(ex) ch dp	2	1	650	1100		
IIIAg	rxsr	sc	fl		pr		on (ex) l	2	2	960	340		
VBq3	da	sc	fl				(ex) sh	2	1	60			
VBq3	da	sc	fl				(ex) sh	2	1	50			
VBq3	da	sc	fl				ch hw	3	2	305	1055		
VBq3	da	sc	fl				ch (ex)	2	1	80	295		
VBq3	da	sc	fl				ch (ex)	3	2	170			
IIIAh	dsr	sc	fl				SU? hd hw	3	2	210			
IIIAg	rxsr	sc	fl				SU c	3	2	665			
IIIAg	rxsr	sc	fl				SU l? c	4	2	400			
VBqf	df	sc	fl				ch (ex) dp	3	2	120	420		
VIs5	sr-ef	sc	fl				l on	4	2	935	1065		
IIIBk	ds	sc	fl			ex	ch dp	2	1	80	160		
VIs5	sr-ef	sc	fl				on hd on	3	1	1600			
VIs5	sr-ef	sc	fl				l af	4	3	1060	1275		
VBqf	df	sc	fl				l af	3	2	400	1150		
VIs5	sr-ef	sc	fl				l?	4	3	600			
VBqt	dt	sc	fl				ch (ex)	2	1	75			
VIs5	sr-ef	sc	fl		pr		dp	4	2	1500			
VIs5	sr-ef	sc	fl		pr		dp	4	3	800			
VIs5	sr-ef	sc	fl		pr		dp	3	1	250			

b

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
900	491268	60	29476062						60		
50	3142	4	12566						24		
615	178718	50	8935889						24		
185	26880	8	215043						24		
120	1885	4	7540						24		
40	942	4	3770						24		
25	1178	4	4712						24		
40	1571	4	6283						24		
50	1964	4	7854						24		
50	1964	4	7854						24		
240	47124	4	188496						40		
3075	5941158	100	594115830						40	Nisqually R	
880	483806	50	24190320						40		
720	67859	4	271434						40		
90	8482	4	33929						40		
75	5007	4	20028						25	trb2	
150	12959	4	51836						15		
695	423036	60	25382165						60		
50	1964	3	5891						40		
240	20735	3	62204						40		
410	64403	4	257611						40		
250	56942	4	227766						40		
695	267468	40	10698719						40		
150	9425	4	37699						40		
610	311411	3	934233						40		
775	584338	90	52590384						40		
200	9425	3	28274						40		
130	5105	3	15315						40		
305	73062	4	292247						60	trb1	
80	5027	4	20106						40	trb1	
120	16022	4	64089						40		
485	79993	30	2399790						60		
1750	914009	30	27420278						60		
2710	851374	30	25541208						5		
180	16965	4	67859						15	Alder Lake	
935	686616	75	51496224						15		
50	3142	4	12566						15	hw	
1400	1759296	95	167133120						15		
1700	1415291	80	113223264						15		
180	56549	6	339293						15		
600	282744	50	14137200						14		
50	2945	4	11781						14		
1500	1767150	80	141372000						70		
800	502656	60	30159360						40		
300	58905	50	2945250						40		

c

APPENDIX III. PERIMETER STUDY AREA LANDSLIDE INVENTORY (see explanation)

GENERAL LANDSLIDE ATTRIBUTES																		
LOCATION			DRAINAGE BASIN	ELEV	AZ	ROCK TYPES		BEDROCK STRUCTURE							LEWIS COUNTY SOIL MAP UNITS			
T/R	LS ID#	*				#1	#2	az	dip	dip	s	fa	f	pl	sc	sc	toe	toe
15 05E	33B1		Nisqually R	1800	295	Tva3		se			ss				165			
15 05E	33B20		Nisqually R	1780	340	Tva3		se			ss				250			
15 05E	33G20		Nisqually R	1960	280	Tva3		se			ss				165			
15 05E	33G21		Nisqually R	2000	280	Tva3		se			ss				165			
15 05E	33K1		Nisqually R	2600	280	Tva3		se			ss				165			
15 05E	33R1		Mineral L	2300	135	Tva3		se			ds				146			
15 05E	33R2		Mineral L	2300	135	Tva3		se			ds				146			
15 05E	33R20		Mineral L	1960	245	Tva3	Qdh	se			ds				200		146	
15 05E	34H1		Mineral C	1800	100	Tva3	Qdh	se			xs				250	7	203	7
15 05E	35A1		Nisqually R	1800	275	Tva		se			xs				199	200		
15 05E	35D1		Mineral C	1800	35	Tva3		se			xs				7		146	
15 05E	35D2		Mineral C	1800	110	Tva3		se			xs				7			
15 05E	35J1		Mineral C	2160	290	Tva		se			xs				160			
15 05E	35M1		Mineral C	1500	40	Qdh		se			xs				49			
15 05E	36Q1		NF Mineral C	2680	80	Tva		se			xs				160			
15 05E	36R1		NF Mineral C	2600	80	Tva		se			ds				160			
15 06E	31H1		Nisqually R	2700	145	Tva		sse			ds				181			
15 06E	31J1		Nisqually R	2700	320	Tva		sse			ss				13			
15 06E	31J2		NF Mineral C	2800	245	Tva		sse			xs				164			
15 06E	31Q1		NF Mineral C	2480	190	Tva		sse			xs				164			

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GENERAL LANDSLIDE ATTRIBUTES										DIMENSIONS			
LANDSLIDE TYPE		LANDSLIDE GEOMORPHIC FEATURES						AC	CE	AERIAL DIMENSIONS			
VARNES	Abbrev	sc	fl	hm	pr	ex	other features			Lx	La	La1	La2
VBq3	da	sc	fl			ex	ch dp	2	1	30			
VBq3	da	sc	fl			ex	ch dp	2	1	30			
VBq3	da	sc	fl				ch sh	3	1	50			
Ia-IId1	rf-rt	sc					c (ex)	3	1	30			
IIIAg	rxsr	sc	fl				h hw bg af	3	3	300			
IIIBk	ds						BIC (ex)	3	2	30			
IIIBk	ds						BIC	3	3	30			
VIs5	sr-ef	sc	fl				dp l	4	2	500			
VIs5	sr-ef	sc	fl		pr?		SU? l	4	2	1440			
VIs5	sr-ef	sc	fl		pr		SU?	4	2	1190	700		
VIs5	sr-ef	sc	fl				h SU?	4	3	1160			
VBq3	da	sc	fl				i SU?	3	3	705	625		
VIs5	sr-ef	sc	fl		pr		gft l	3	2	2125	635		
IIIAh	dsr	sc	fl				SU (ex) hd l	3	2	665			
IIIAh	dsr	sc	fl				h	3	3	695			
IIIAg	rxsr	sc	fl				l	4	3	1125			
VBq3	da	sc	fl			ex	sh	2	1	120			
IIIAh	dsr	sc	fl				bg	4	1	505			
VIs5	sr-ef	sc	fl					4	2	1625			
IIIBk-VII	ds-cb	sc	fl			ex		2	1	60	60		

DIMENSIONS				SLOPE					FOREST PRACTICES		
AERIAL DIMENSIONS		DEPTH	VOLUME	OFFICE		FIELD				EFFECTS	
Width (ft)	Area (feet squared)	(ft)	(cubic feet)	1	2	sc 1	fl 2	ot 3	cc age	(GENERAL NOTES)	#
30	707	4	2827						10		
30	707	4	2827						10		
60	2356	4	9425						60		
400	9425	3	28274						60		
250	58905	40	2356200						60		
30	707	4	2827						60		
30	707	4	2827						60		
500	196350	90	17671500						60		
2160	2442908	120	293148979						60	Mineral C	
1150	1074820	80	85985592						10		
1410	1284600	80	102768019						10	Mineral C	
520	287928	6	1727566						10	Mineral C	
2125	3546572	90	319191469						60		
995	519680	25	12991989						10	Mineral C	
695	379368	60	22762070						40		
1125	994022	60	59641313						40		
690	65031	4	260124						40	trb	
585	232027	50	11601340						40	trb	
2075	2648271	100	264827063						40		
155	7304	4	29217						40		

c

APPENDIX IV. EXPLANATION OF SOILS DATA

Most soils data are taken from the surveys of the Lewis County area (SSLC) (Evans and Fibich, 1987) and the Central Area (SSC) (DNR, 1983?). Some data were borrowed from the soil surveys of Pierce and Lewis Counties (Zulauf, 1979; Pringle, 1990; Goldin, 1992) and the report for the South Puget Sound Area (DNR, 1983?). Soil mapping by the U.S. Soil Conservation Service (SCS) is typically based on whole, part, or multiple counties. The Lewis County survey covers most of our project area. New reports for Thurston and eastern Pierce Counties were released during the course of the project. (The older Pierce County survey, though available, covered little of our area.)

Soil surveys are produced cooperatively, with DNR, SCS, U.S. Forest Service, and other organizations contributing mapping and information. Most soil units are convergent in name, descriptions, and geographic extent, wherever DNR and SCS maps overlap. However, there have been some changes in series names and phases between mapping projects.

Each soil phase is described on seven consecutive pages. We provide the area and landslide densities for each soil phase in the general and focus study areas. Note the Lewis County soil phase number in the left column of each page for referencing data on following pages. For units not found in Lewis County, values are taken from reports for Pierce County (Goldin, 1992) or Thurston County, indicated by P or T added to the number.

General Soil Characteristics

The **Lewis County (Co.) phase soil number (#), Department of Natural Resource (DNR), Soil Conservation Service (SCS)** soil unit identification numbers enable users to cross-reference the soil units between surveys. DNR data are from the Forest Land Grading Program (FLGP) survey, 1975-81. Identification numbers are applied to the whole state; DNR Central region includes Lewis and Thurston Counties; DNR South Puget Sound (SPS) region includes Pierce County. The **soil unit name** is the soil phase name taken from the SSC. The **soil unit slope range** gives the **county** and **DNR** slope gradient ranges in percent slope as taken from the SSLC and SCC, respectively. **Landform** and **parent material** are the geomorphic landform and geologic parent material for each soil phase as described by the SCC. **Hydrology** gives the restrictive layer and depth to water table (n/a, not applicable; minimum depth [inches] to restrictive layer given in parentheses). The **restrictive layer** is below the soil profile and restricts growth of roots and movement of water (e.g., clay). **Rooting depth** gives the depth range penetrated by the roots (**few** indicates that few roots occur below indicated depth). Two **soil depth** sources are provided. The **county soil depth** derived from SSLC gives the depths to the one or more separated soil horizons; base gives the soil base depth or total depth of the soil. The **DNR soil depth** (SCC) gives the minimum and (or) maximum depths of the soil. The **unified soil classification (USCS) system for each soil layer** gives the USCS soil classification for each soil horizon as well as the weight percentage of fragments **>3 inch** as delineated by the SSLC.

DNR Slope Stability Ratings

The **DNR slope stability ratings** are from the State Soil Survey Report for the Central Area (SSC) (DNR, 1983?). A **natural forest** is in a natural or undisturbed state. A **disturbed forest** refers to a forest that has been disturbed by human activities (e.g., timber harvesting). The **slope stability** ratings (n/a, not applicable; s, stable; u, unstable; v, very unstable) for natural and disturbed conditions commonly reflect the **general slope gradient class** (lo, low; med, medium; hi, high). The **road stability ratings** (n/a, not applicable; sl, slight; m, moderate; s, severe) also commonly reflect the general slope gradient class of the soil phase affected by road building.

Soil Unit Area

The **soil unit area**, in acres, was derived from the DNR soil map coverage of the **study areas**.

Landslide Density on Disturbed and Undisturbed Areas

The landslide densities are given for (1) each soil unit for the **general and focus study areas**, (2) disturbed, undisturbed, and "total" management conditions, and (3) for general **landslide types**. General landslide types include; deep, deep-seated landslides (e.g., slump-earthflow); road, road failures (e.g., debris avalanche originating in road sidecast); shallow, shallow landslides (e.g., debris torrent); cliff, cliff landslides (e.g., rock fall). The **landslide density** is the number of landslides/160 acres calculated by dividing the number of landslides (for that general landslide type) by the total area of the soil polygon(s), and multiplying by 160 (acres). Hyphenated landslide density indicates that the soil unit area is zero. **Disturbed areas** are defined as those harvested 60 or less years ago. **Natural areas** are those harvested more than 60 years ago. **Total** landslide density is the sum of natural and disturbed conditions and disregards management conditions.

REFERENCES CITED

Evans, R. L.; Fibich, W. R., 1987, Soil survey of Lewis County area, Washington: U.S. Soil Conservation Service, 466 p., 108 pl.

Goldin, A., 1992, Soil survey of Snoqualmie Pass area, parts of King and Pierce Counties, Washington: U.S. Soil Conservation Service, 601 p., 1 pl.

Pringle, R. F., 1990, Soil survey of Thurston County area, Washington: U.S. Soil Conservation Service, 283 p., 51 pl.

Washington Department of Natural Resources, 1983?, State soil survey—Report for the central area: Washington Department of Natural Resources Forest Land Management Division, 2 v.

Washington Department of Natural Resources, 1983?, State soil survey—Report for the South Puget Sound area: Washington Department of Natural Resources Forest Land Management Division, 2 v.

Zulauf, A. S., 1979, Soil survey of Pierce County area, Washington: U.S. Soil Conservation Service, 131 p., 57 pl.

APPENDIX IV. SOILS DATA (SEE EXPLANATION)

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS: Soil unit identification numbers: DNR/FLGP: Central region #	DNR/FLGP: SPS region #	SCS county soil surveys: Lewis #	Pierce #	Thurston #	Soil unit name (series, phase)	Slope range (%): SCS Lo	SCS Hi	DNR Lo	DNR Hi
2	0113		2			andaquepts, level	0	3	0	3
3	0144		3			andic xerumbrepts, steep	45	90	45	90
4	0157	0223	4	207		" " , overflow (udifluvents, 0-8% PC)	0	3	0	3
6	0443		6			Baumgard loam, 8-30%	8	30	8	30
7	0445	0446	7		10	Baumgard loam, 30-65% (40-65% SPS)	30	65	30	65
8	0447		8			Baumgard loam, 65-90%	65	90	65	90
10	0449		10			Baumgard silt loam, very deep, 30-65%	30	65	30	65
13T	0455				13	Baumgard-rock outcrop complex, 40-65%	40	65	40	65
11	0484		11			Bellicum very cindery loamy sand, 8-30%	8	30	8	30
12	0485		12			Bellicum very cindery loamy sand, 30-65%	30	65	30	65
13	0486		13			Bellicum very cindery loamy sand, 65-90%	65	90	65	90
14	0487		14			Bellicum-rock outcrop complex, 30-65%	30	65	30	65
15	0488		15			Bellicum-rock outcrop complex, 65-90%	65	90	65	90
106P		0491		106 (Klaber)		Bellingham silt loam	0	8	0	3
172P		0622		172 (Ovall)		Brew gravelly loam, 6-30%	15	30	6	30
173P		0623		173 (Ovall)		Brew gravelly loam, 30-65%	30	65	30	65
23	0641		23			Bromo very cindery sandy loam, 0-8%	0	8	0	8
24	0642		24			Bromo very cindery sandy loam, 8-30%	8	30	8	30
25	0643		25			Bromo very cindery sandy loam, 30-65%	30	65	30	65
31	0990		31			Cattcreek very cindery loamy sand, 8-30%	8	30	8	30
32	0988		32			Cattcreek very cindery loamy sand, 30-65%	30	65	30	65
33	0989		33			Cattcreek very cindery loamy sand, 65-90%	65	90	65	90
38	1304		38			" " " ", till substratum, 30-65%	30	65	30	65
39	1300		39			Cattcreek-rock outcrop complex, 30-65%	30	65	30	65
40	1302		40			Cattcreek-rock outcrop complex, 65-90%	65	90	65	90
49	1097		49			Cinebar silt loam, 0-8%	0	8	0	8
50	1101	1100	50	44		Cinebar silt loam, 8-15% (6-15% SPS)	8	15	8	15
51	1102		51			Cinebar silt loam, 15-30%	15	30	15	30
52	1105	1104	52	46		Cinebar silt loam, 30-65% (30-45% SPS)	30	65	30	65
56	1311		56			Cinebar Variant silty clay loam, 30-65%	30	65	30	65
57	1312		57			Cispus cindery sandy loam, 0-8%	0	8	0	8
58	1313		58			Cispus cindery sandy loam, 8-15%	8	15	8	15
59	1314		59			Cispus cindery sandy loam, 15-30%	15	30	15	30
60	1315		60			Cispus cindery sandy loam, 30-65%	30	65	30	65
70	1320		70			Cotteral very cindery sandy loam, 0-8%	0	8	0	8
71	1186		71			Cotteral very cindery sandy loam, 8-30%	8	30	8	30
72	1187		72			Cotteral very cindery sandy loam, 30-65%	30	65	30	65
73	1321		73			" " " " , siltstone substratum, 0-30%	0	30	0	30
76	1324		76			cryohemists, level	0	1	0	2
77	1666		77			Dobbs loam, 8-30%	8	30	8	30
78	1667		78			Dobbs loam, 30-65%	30	65	30	65
89	2406		89			Galvin silt loam, 0-8%	0	8	0	8
90	2407		90			Galvin silt loam, 8-15%	8	15	8	15
91	2475		91			Glenoma very cindery loam	0	3	0	3
92	2522	2523	92	69		Greenwater loamy sand (0-8% SPS)	0	3	0	8
105	3608		105			Jonas gravelly silt loam, 8-30%	8	30	8	30
106	3610		106	87		Jonas gravelly silt loam, 30-65%	30	65	30	65
49T	3613				49	Jonas silt loam, 20-40% (30-65% TC)	15	30	20	40

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS	
	Landforms	Parent materials
2	upland basins	mixed alluvium, high volcanic ash content
3	glaciated mountainsides and escarpments	basalt, andesite, till, ash-pumice colluvium
4	stream or river flood plains adjacent to channel	mainly alluvial sand and gravel
6	upland benches, hillsides and ridgetops	andesite residuum and colluvium
7	upland benches, hillsides and ridgetops	andesite residuum and colluvium
8	upland benches, hillsides and ridgetops	andesite residuum and colluvium
10	upland benches, hillsides and ridgetops	basalt residuum and colluvium
13T	upland benches, hillsides and ridgetops	basalt residuum and colluvium
11	upland benches, mountainsides and ridgetops	pumice, coarse ash over andesite or breccia
12	upland benches, mountainsides and ridgetops	pumice, coarse ash over andesite or breccia
13	upland benches, mountainsides and ridgetops	pumice, coarse ash over andesite or breccia
14	upland benches, mountainsides and ridgetops	pumice, coarse ash over andesite or breccia
15	upland benches, mountainsides and ridgetops	pumice, coarse ash over andesite or breccia
106P	depressions in glacial till plains and drainages	fine alluvium and lacustrine sediments
172P	mountainsides	andesite residuum and colluvium
173P	mountainsides	andesite residuum and colluvium
23	upland benches, mountainsides and broad ridgetops	pumice over highly weathered volcanic ash
24	upland benches, mountainsides and broad ridgetops	pumice over highly weathered volcanic ash
25	upland benches, mountainsides and broad ridgetops	pumice over highly weathered volcanic ash
31	upland benches, mountainsides and ridgetops	pumice and ash over weathered andesite
32	upland benches, mountainsides and ridgetops	pumice and ash over weathered andesite
33	upland benches, mountainsides and ridgetops	pumice and ash over weathered andesite
38	cirque basins, glacial valleys and mountainsides	pumice and ash over glacial till
39	mountainsides and ridgetops	weathered andesite
40	mountainsides and ridgetops	weathered andesite
49	high terraces and upland hillsides	highly weathered volcanic ash
50	high terraces and upland hillsides	highly weathered volcanic ash
51	high terraces and upland hillsides	highly weathered volcanic ash
52	high terraces and upland hillsides	highly weathered volcanic ash
56	upland benches and hillsides	highly weathered tuff residuum and colluvium
57	high terraces and upland hillsides	deep deposits of pumice and ash
58	high terraces and upland hillsides	deep deposits of pumice and ash
59	high terraces and upland hillsides	deep deposits of pumice and ash
60	high terraces and upland hillsides	deep deposits of pumice and ash
70	upland benches, mountainsides and broad ridgetops	pumice over highly weathered ash
71	upland benches, mountainsides and broad ridgetops	pumice over highly weathered ash
72	upland benches, mountainsides and broad ridgetops	pumice over highly weathered ash
73	alpine valley side slopes and mountainsides	pumice over weathered siltstone and ash
76	basins in mountain valleys and cirques	peat and muck, ash and pumice
77	cirque basins, glacial valleys and mountainsides	andesite, till, and ash
78	cirque basins, glacial valleys and mountainsides	andesite, till, and ash
89	stream terraces, alluvial fans and bottom lands	clayey old alluvium
90	stream terraces, alluvial fans and bottom lands	clayey old alluvium
91	stream terraces and alluvial fans	deep deposits of pumice and ash
92	terraces	alluvium
105	upland benches, mountainsides and ridgetops	andesite and ash residuum and colluvium
106	upland benches, mountainsides and ridgetops	andesite and ash residuum and colluvium
49T	upland benches, mountainsides and ridgetops	andesite and ash residuum and colluvium

b

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS												
	Subsurface hydrology			Rooting depth (in) (few = most roots above that depth)			Soil depth						
	Restrictive layer (minimum depth, inches)	Depth to water table (inches)					SCS (horizons)					DNR	
		Min	Max	Few	Min	Max	Top	2	3	4	Base	Min	Max
2	none	na			60	>60	12	37			60		>60
3	basalt, andesite, or bedrock till ?	na			20	60	6	30			45		>60
4	droughty, stratified layers (20)	na			10	20	8	20			60		>60
6	andesite bedrock	na			40	60	15	31			46	40	>60
7	andesite bedrock	na			40	60	15	31			46	40	>60
8	andesite bedrock	na			40	60	15	31			46	40	>60
10	none	na			60	>60	8	40			60		>60
13T	none	na			60	>60	14	30			45		>60
11	andesite or breccia bedrock	na			40	60	7	18	33		50	40	60
12	andesite or breccia bedrock	na			40	60	7	18	33		50	40	60
13	andesite or breccia bedrock	na			40	60	7	18	33		50	40	60
14	andesite or breccia bedrock	na			40	60	7	18	33		50	40	60
15	droughty pumice layer, " " " "	na			40	60	7	18	33		50	40	60
106P	none	0	>12		40	60	6	22			60		>60
172P	andesite bedrock	na			20	30	3				24	20	30
173P	andesite bedrock	na			20	30	30				24	20	30
23	droughty pumice layer	na			60	>60	10	23	35		60		>60
24	droughty pumice layer	na			60	>60	10	23	35		60		>60
25	droughty pumice layer	na			60	>60	10	23	35		60		>60
31	droughty pumice layer, andesite bedrock	na			40	60	5	13	24		56	40	60
32	droughty pumice layer, andesite bedrock	na			40	60	5	13	24		56	40	60
33	droughty pumice layer, andesite bedrock	na			40	60	5	13	24		56	40	60
38	compact till (52)	na			40	60	6	14	29	41	52	40	60
39	andesite bedrock	na			40	60	5	13	24		56		
40	andesite bedrock	na			40	60	5	13	24		56		
49	none		40		60	>60	12				60		>60
50	none	na?	40		60	>60	12				60		>60
51	none		40		60	>60	12				60		>60
52	none	na?	40		60	>60	12				60		>60
56	none	na			60	>60	14				60		>60
57	droughty pumice layer (10)	na			60	>60	10	15	43		60		>60
58	droughty pumice layer (10)	na			60	>60	10	15	43		60		>60
59	droughty pumice layer (10)	na			60	>60	10	15	43		60		>60
60	droughty pumice layer (10)	na			60	>60	10	15	43		60		>60
70	droughty pumice layer	na			60	>60	3	6	30		60		>60
71	droughty pumice layer	na			60	>60	3	6	30		60		>60
72	droughty pumice layer	na			60	>60	3	6	30		60		>60
73	droughty pumice layer	na			60	>60	9	32			60		>60
76	none	0	2		60	>60	16	30			60		>60
77	compact till (32)		32		20	40	11				32	20	40
78	compact till (32)		32		20	40	11				32	20	40
89	silty clay (42)	6	18	14	60	>60	14	41			60		>60
90	silty clay (42)	6	18	14	60	>60	14	41			60		>60
91	droughty pumice (45)	na			40	60	7	28	45		60		>60
92	none	na				>60	7				60		>60
105	none	na			60	>60	5	16			60		>60
106	none	na			60	>60	5	16			60		>60
49T	none	na			60	>60	10	48			60		>60

c

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS — Unified Soil Classification System (USCS)																							
	Top horizon						2nd horizon						3rd horizon						4th horizon					
	Class				Material >3 in (%)		Class				Material >3 in (%)		Class				Material >3 in (%)		Class				Material >3 in (%)	
	1	2	3	4	Min	Max	1	2	3	4	Min	Max	1	2	3	4	Min	Max	1	2	3	4	Min	Max
2	ML				0	0	ML	SM			0	0												
3	GM				0	5	GM				0	30												
4	SM	SP-SM			0	5	SM				0	5												
6	ML				0	0	CL				0	10												
7	ML				0	0	CL				0	10												
8	ML				0	0	CL				0	10												
10	ML				0	5	CL	GC			0	5												
13T	ML				0	0	CL				1	10												
11	SM	SP-SM			0	0	SP				0	0	SM				25	40						
12	SM	SP-SM			0	0	SP				0	0	SM				25	40						
13	SM	SP-SM			0	0	SP				0	0	SM				25	40						
14	SM	SP-SM			0	0	SP				0	0	SM				25	40						
15	SM	SP-SM			0	0	SP				0	0	SM				25	40						
106P	CL-ML				0	0	CL				0	0												
172P	SM				0	10																		
173P	SM				0	10																		
23	SM				0	0	SP				0	0	M	MH			0	10						
24	SM				0	0	SP				0	0	M	MH			0	10						
25	SM				0	0	SP				0	0	M	MH			0	10						
31	SM	SP-SM			0	0	SM	SP-SM			0	0	SP				0	0						
32	SM	SP-SM			0	0	SM	SP-SM			0	0	SP				0	0						
33	SM	SP-SM			0	0	SM	SP-SM			0	0	SP				0	0						
38	SM				0	0	SM	SP-SM			0	0	SP				0	0	G	SM			30	45
39	SM	SP-SM			0	0	SM	SP-SM			0	0	SP				0	0						
40	SM	SP-SM			0	0	SM	SP-SM			0	0	SP				0	0						
49	ML	MH	OL	OH	0	5																		
50	ML	MH	OL	OH	0	5																		
51	ML	MH	OL	OH	0	5																		
52	ML	MH	OL	OH	0	5																		
56	ML	MH			0	0																		
57	SM				0	5	SM	SP-SM			0	0	SP				0	0						
58	SM				0	5	SM	SP-SM			0	0	SP				0	0						
59	SM				0	5	SM	SP-SM			0	0	SP				0	0						
60	SM				0	5	SM	SP-SM			0	0	SP				0	0						
70	SM				0	0	SM	SP-SM			0	0	SP				0	0						
71	SM				0	0	SM	SP-SM			0	0	SP				0	0						
72	SM				0	0	SM	SP-SM			0	0	SP				0	0						
73	SM				0	0	SP				0	0												
76	PT				0	0	SM				0	0												
77	ML	MH	OL	OH	0	0																		
78	ML	MH	OL	OH	0	0																		
89	ML				0	0	ML	CL			0	0												
90	ML				0	0	ML	CL			0	0												
91	SM				0	0	SM				0	0	SM				0	0						
92	SM				0	0																		
105	SM	ML	MH		0	5	GM	SM			20	45												
106	SM	ML	MH		0	5	GM	SM			20	45												
49T	ML	MH			0	0	ML				0	0												

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS USCS (continued) Basal horizon Class 1	2	3	4	Material >3 in (%) Min	Max	D N R STABILITY RATINGS Slope stability Natural General slope gradient class Lo	Med	Hi	Disturbed Lo	Med	Hi	Road stability (cut, fill & sidecast) Lo	Med	Hi	MAP UNIT AREA (acres) General area	Focus area
2	ML	MH			0	0	s			s			na			58.46	58.46
3	GM				10	40			s			u			s	2038.12	1848.05
4	SP	GP	SM	GM	0	45	s			s			na			204.77	62.46
6	GM	ML	SM		0	25	s			s			sl			1275.20	25.02
7	GM	ML	SM		0	25		s			s			m		840.78	27.69
8	GM	ML	SM		0	25			s			u			m	30.01	0
10	GM	ML			0	5		s			s			m		9.39	9.39
13T	GM	ML	SM		0	25		s			s			m		83.98	0
11	GM	GP-GM			50	65	s			s			m			581.56	280.61
12	GM	GP-GM			50	65		s			s			s		4825.42	2476.75
13	GM	GP-GM			50	65			s			u			s	1073.44	363.52
14	GM	GP-GM			50	65		s			s			s		783.53	394.51
15	GM	GP-GM			50	65			s			u			s	1586.19	745.07
106P	CH				0	0	s			s			na			114.58	0
172P	SM	GM			0	25	s			s			sl			66.70	0
173P	SM	GM			0	25		s			s			m		49.75	0
23	GM	ML	SM	MH	0	10	s			s			m			300.44	300.44
24	GM	ML	SM	MH	0	10	s			s			m			1013.52	698.88
25	GM	ML	SM	MH	0	10		s			s			s		1256.16	392.35
31	GM	GP-GM			20	35	s			s			m			1774.74	531.40
32	GM	GP-GM			20	35		s			s			s		7209.54	2962.88
33	GM	GP-GM			20	35			s			u			s	1750.25	1113.77
38	GM				41	52		s			u			s		30.75	30.75
39	GM	GP-GM			20	35		s			s			s		1657.74	651.35
40	GM	GP-GM			20	35			s			u			s	953.32	311.01
49	ML	MH			0	5	s			s			sl			1835.41	865.84
50	ML	MH			0	5	s			s			sl			2426.49	1611.56
51	ML	MH			0	5	s			s			sl			548.59	291.37
52	ML	MH			0	5		s			s			m		748.85	673.56
56	ML	MH			0	0		s				u		s		34.18	34.18
57	ML	MH			0	5	s			s			m			737.82	179.46
58	ML	MH			0	5	s			s			m			203.96	21.30
59	ML	MH			0	5	s			s			m			613.09	303.71
60	ML	MH			0	5		s			u			s		1108.44	761.99
70	SM	ML	MH		0	5	s			s			m			346.63	0
71	SM	ML	MH		0	5	s			s			m			2586.67	440.81
72	SM	ML	MH		0	5		s			s			s		408.47	31.69
73	ML	MH			0	0	s			s			m			22.80	10.76
76	PT				0	0	s			s			na			330.25	81.09
77	GM	SM			10	25	s			s			m			76.13	76.13
78	GM	SM			10	25		s			u			m		185.40	173.03
89	MH				0	0	s			s			m			580.58	264.01
90	MH				0	0	s			s			m			12.86	0
91	SP				0	0	s			s			na			243.70	148.52
92	SM	SP-SM			0	0	s			s			na			798.28	0
105	ML	MH			10	30	s			s			sl			933.75	773.26
106	ML	MH			10	30		s			s			m		816.43	360.10
49T	ML				0	0		s			s		sl			33.57	0

e

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres) General study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.71	0.83	0.95	0.12	0.47	0.00	2.25	0.00	1.18	0.83	3.20	0.12
4	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.30	0.00	0.30	0.00	0.30	0.00	0.30	0.00	0.60	0.00	0.60	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	17.04	0.00	0.00	0.00	17.04	0.00	0.00	0.00
13T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.00	0.00
12	0.60	0.17	0.50	0.03	0.07	0.00	0.00	0.00	0.66	0.17	0.50	0.03
13	1.19	0.15	1.79	0.00	0.00	0.00	0.00	0.00	1.19	0.15	1.79	0.00
14	1.66	0.41	1.45	0.00	0.00	0.00	0.00	0.00	1.66	0.41	1.45	0.00
15	1.71	0.40	3.93	0.10	0.00	0.00	0.30	0.20	1.71	0.40	4.24	0.30
106P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
173P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.95	0.16	0.47	0.00	0.00	0.00	0.16	0.00	0.95	0.16	0.63	0.00
25	1.40	0.00	0.76	0.00	0.00	0.00	0.00	0.00	1.40	0.00	0.76	0.00
31	0.36	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.36	0.00
32	0.63	0.20	1.07	0.02	0.11	0.02	0.13	0.00	0.74	0.22	1.21	0.02
33	0.64	0.09	0.82	0.09	0.09	0.09	0.00	0.09	0.73	0.18	0.82	0.18
38	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.20	0.00	0.00	0.00
39	0.39	0.29	0.48	0.00	0.00	0.10	0.00	0.00	0.39	0.39	0.48	0.00
40	0.34	0.84	1.17	0.00	0.17	0.00	0.67	0.17	0.50	0.84	1.85	0.17
49	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00
50	0.15	0.08	0.23	0.00	0.00	0.00	0.00	0.00	0.15	0.08	0.23	0.00
51	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.40	0.00	0.00	0.00
52	2.35	0.85	3.85	0.00	0.43	0.00	0.00	0.00	2.78	0.85	3.85	0.00
56	0.00	0.00	0.00	0.00	0.00	0.00	4.68	0.00	0.00	0.00	4.68	0.00
57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	0.30	0.00	0.30	0.00	0.00	0.30	0.00	0.00	0.30	0.30	0.30	0.00
60	1.03	0.00	0.82	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.82	0.00
70	0.46	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.92	0.00	0.00	0.00
71	0.31	0.06	0.37	0.00	0.00	0.00	0.06	0.00	0.31	0.06	0.43	0.00
72	1.57	0.39	0.39	0.00	0.00	0.00	0.00	0.00	1.57	0.39	0.39	0.00
73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.00	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00
89	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105	1.25	0.18	0.18	0.00	0.00	0.00	0.71	0.00	1.25	0.18	0.89	0.00
106	0.42	0.42	0.42	0.21	0.21	0.00	0.00	0.00	0.63	0.42	0.42	0.21
49T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

f

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres)											
	Focus study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
2	-	-	-	-	-	-	-	-	-	-	-	-
3	0.69	0.96	1.10	0.14	0.55	0.14	2.62	2.89	1.24	1.10	3.72	3.03
4	0.00	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.56	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	-	-	-	-	-	-	-	-	-	-	-	-
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13T	-	-	-	-	-	-	-	-	-	-	-	-
11	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00
12	0.84	0.13	0.39	0.06	0.06	0.00	0.00	0.00	0.90	0.13	0.39	0.06
13	2.20	0.00	0.88	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.88	0.00
14	1.67	0.83	1.67	0.00	0.00	0.00	0.00	0.00	1.67	0.83	1.67	0.00
15	0.86	0.64	3.65	0.00	0.00	0.00	0.21	0.00	0.86	0.64	3.87	0.00
106P	-	-	-	-	-	-	-	-	-	-	-	-
172P	-	-	-	-	-	-	-	-	-	-	-	-
173P	-	-	-	-	-	-	-	-	-	-	-	-
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	1.14	0.23	0.69	0.00	0.00	0.00	0.00	0.00	1.14	0.23	0.69	0.00
25	2.04	0.00	0.82	0.00	0.00	0.00	0.00	0.00	2.04	0.00	0.82	0.00
31	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00
32	0.72	0.28	0.99	0.06	0.06	0.00	0.11	0.00	0.77	0.28	1.10	0.06
33	0.00	0.00	0.72	0.14	0.14	0.00	0.00	0.14	0.14	0.00	0.72	0.29
38	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.20	0.00	0.00	0.00
39	0.49	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.49	0.49	0.00	0.00
40	0.51	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.51	1.54	1.54	0.00
49	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
50	0.20	0.10	0.30	0.00	0.00	0.00	0.00	0.00	0.20	0.10	0.30	0.00
51	0.00	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.55	0.00	0.00	0.00
52	1.90	0.95	0.95	0.00	0.24	0.00	0.00	0.00	2.14	0.95	0.95	0.00
56	0.00	0.00	0.00	0.00	0.00	0.00	4.68	0.00	0.00	0.00	4.68	0.00
57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	0.00	0.00	0.73	0.00	0.00	0.73	0.00	0.00	0.00	0.73	0.73	0.00
60	1.85	0.00	1.48	0.00	0.00	0.00	0.00	0.00	1.85	0.00	1.48	0.00
70	-	-	-	-	-	-	-	-	-	-	-	-
71	1.46	0.00	0.37	0.00	0.00	0.00	0.00	0.00	1.46	0.00	0.37	0.00
72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0.00	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
89	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00
90	-	-	-	-	-	-	-	-	-	-	-	-
91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	-	-	-	-	-	-	-	-	-	-	-	-
105	1.45	0.21	0.21	0.00	0.00	0.00	0.83	0.00	1.45	0.21	1.04	0.00
106	0.89	0.44	0.89	0.00	0.44	0.44	0.00	0.00	1.33	0.89	0.89	0.00
49T	-	-	-	-	-	-	-	-	-	-	-	-

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APPENDIX IV. SOILS DATA (SEE EXPLANATION)

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS: Soil unit identification numbers: DNR / FLGP: Central region #	DNR / FLGP: S P S region #	SCS county soil surveys: Lewis #	Pierce #	Thurston #	Soil unit name (series, phase)	Slope range (%): SCS Lo	SCS Hi	DNR Lo	DNR Hi
116	3940		116	106		Klaber silt loam, 0-3%	0	3	0	3
118	4202		118			Lacamas silt loam, 0-3%	0	3	0	3
119	4203		119			Lacamas silt loam, 3-8%	3	8	3	8
123	4275		123			Ledow sand, 0-3%	0	3	0	3
126	4628		126			Mal clay loam, 8-30%	8	30	8	30
127	4629		127			Mal clay loam, 30-65%	30	65	30	65
128	4666		128	132		Mashel (silt) loam, 5-30%	5	30	5	30
129	4667		129	133		Mashel (silt) loam, 30-65%	30	65	30	65
149P		5241		149		National cindery sandy loam, 0-8%	0	8	0	8
136	5267		136			Nesika loam, 2-5%	2	5	2	15
137	5268		137			Nesika loam, 5-15%	5	15	5	15
39T	5269				39 (Giles)	Nesika silt loam	0	15	0	15
141	5275		141			Nevat sand, 15-30%	15	30	15	30
142	5276		142			Nevat sand, 30-65%	30	65	30	65
143	5277		143			Nevat-rock outcrop complex, 30-65%	30	65	30	65
144	5278		144			Nevat-rock outcrop complex, 65-90%	65	90	65	90
145	5301		145			Newaukum gravelly silt loam, 5-15%	5	15	5	15
146	5303		146			Newaukum gravelly silt loam, 15-30%	15	30	15	30
147	5305		147			Newaukum gravelly silt loam, 30-65%	30	65	30	65
148	5315		148			Newberg fine sandy loam (0-8%)	0	3	0	8
154	5631		154			Olequa silt loam, 15-30%	15	30	15	30
159	6085		159	177		Pheeney gravelly loam, 8-30%	8	30	8	30
160	6087, 6210		160	178		Pheeney gravelly loam, 30-65% (40-65%)	30	65	30	65
161	6088		161			Pheeney gravelly loam, 65-90%	65	90	65	90
162	6095		162			Pheeney-Jonas complex, 8-30%	8	30	8	30
163	6096		163			Pheeney-Jonas complex, 30-65%	30	65	30	65
164	6097		164			Pheeney-rock outcrop complex, 30-65%	30	65	30	65
181P		6098		181		Pheeney-rock outcrop complex, 30-90%	30	90	30	90
165	6099		165			Pheeney-rock outcrop complex, 65-90%	65	90	65	90
187P		6118		187		Pilchuck loamy fine sand (0-3%)	0	3	0	3
166	6142		166			pits				
170	6203		170			Puget silt loam (0-3%)	0	3	0	3
172	6649		172			Reed silty clay loam (0-3%)	0	3	0	3
174	6658		174			Reichel loam, 0-8%	0	8	0	8
175	6659		175			Reichel loam, 8-30% (5-30% SPS)	8	30	8	30
176	6660		176			Reichel loam, 30-65%	30	65	30	65
211P		6661		211		Reichel silt loam, 5-30%	6	30	5	30
211P		6861		211		Reichel silt loam, 15-30%	6	30	15	30
177	6664		177			Reichel-rock outcrop complex, 30-65%	30	65	30	65
178	6662		178			Reichel Variant silt loam, 8-30%	8	30	8	30
179	6663		179			Reichel Variant silt loam, 30-65%	30	65	30	65
180	6734		180	215		riverwash				
181	6771		181			rock outcrop				
184	6798		184			rock outcrop-Pheeney complex, 65-90%	65	90	65	90
185	6807		185			rock outcrop-Stahl complex, 65-90%	65	90	65	90
186	6856		186			rubbleland				
228P		7200		228		Scamman silt loam, 6-15%	6	15	6	15
229P		7201		229		Scamman silt loam, 15-30%	15	30	15	30

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS	
	Landforms	Parent materials
116	stream terraces and bottom lands	fine-textured alluvium
118	glaciofluvial terraces and bottom lands	weathered old glacial drift residuum
119	glaciofluvial terraces and bottom lands	weathered old glacial drift residuum
123	low river terraces and flood plains	alluvial sands, some gravel and worn pumice
126	upland benches and mountainsides	weathered siltstone residuum
127	upland benches and mountainsides	weathered siltstone residuum
128	glaciated uplands	glacial till
129	glaciated uplands	glacial till
149P	high river terraces and toe-slopes of hillslopes	pumice and ash over glacial outwash
136	alluvial fans and foot slopes	mixed alluvium from and andesite and ash
137	alluvial fans and foot slopes	mixed alluvium from and andesite and ash
39T	alluvial fans and foot slopes	mixed alluvium from and andesite and ash
141	upland benches, mountainsides and escarpments	sandy volcanic ash over andesite and ash
142	upland benches, mountainsides and escarpments	sandy volcanic ash over andesite and ash
143	upland benches, mountainsides and escarpments	sandy volcanic ash over andesite and ash
144	upland benches, mountainsides and escarpments	sandy volcanic ash over andesite and ash
145	high terraces and upland hillsides	weathered ash and some till
146	high terraces and upland hillsides	weathered ash and some till
147	high terraces and upland hillsides	weathered ash and some till
148	low stream and river terraces and bottom lands	silty to fine sandy alluvium
154	high terraces and plains	silty old alluvium
159	upland benches, ridgetops, mountainsides, scarps	andesite and ash residuum and colluvium
160	upland benches, ridgetops, mountainsides, scarps	andesite and ash residuum and colluvium
161	upland benches, ridgetops, mountainsides, scarps	andesite and ash residuum and colluvium
162	upland benches, ridgetops, and mountainsides	andesite and ash residuum and colluvium
163	upland benches, ridgetops, and mountainsides	andesite and ash residuum and colluvium
164	upland benches, ridgetops, and mountainsides	andesite and ash residuum and colluvium
181P	upland benches, ridgetops, mountainsides, scarps	andesite and ash residuum and colluvium
165	upland benches, ridgetops, mountainsides, scarps	andesite and ash residuum and colluvium
187P	floodplains	alluvium
166		
170	low river terraces and floodplains	recent alluvium
172	stream and river flood plains	clayey alluvium
174	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
175	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
176	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
211P	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
211P	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
177	mountainsides, broad ridgetops and cirque basins	andesite and ash residuum
178	mountainsides and ridgetops	siltstone, sandstone, ash residuum-colluvium
179	mountainsides and ridgetops	siltstone, sandstone, ash residuum-colluvium
180	river channels and bars	riverwash
181	rock outcrop	various
184	upland benches,ridgetops,mountainsides,escarpments	andesite and ash colluvium and residuum
185	ridgetops, mountainsides and escarpments	andesite and ash colluvium and residuum
186	ridgetops and steep valley sides	various
228P	glciofluvial terraces, plains and escarpments	old glacial drift residuum
229P	glciofluvial terraces, plains and escarpments	old glacial drift residuum

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS													
	Subsurface hydrology			Rooting depth (in) (few = most roots above that depth)			Soil depth							
	Restrictive layer (minimum depth, inches)	Depth to water table (inches)					SCS (horizons)					DNR	
		Min	Max	Few	Min	Max	Top	2	3	4	Base	Min	Max
116	silty clay (22)	0	6	22	60	>60	8	22			60		>60
118	silty clay and clay (27)	0	6		27	27	7	17			60		>60
119	silty clay and clay (27)	0	6		27	27	7	17			60		>60
123	droughty sand (24)	na		24	60	>60	8	20	24		60		>60
126	none	na			60	>60	17	51			60		>60
127	none	na			60	>60	17	51			60		>60
128	none	na				>60	7	26	59		60		>60
129	none	na				>60	7	26	59		60		>60
149P	droughty pumice layer	na			40	>60	10	28	46		60		>60
136	none	na			60	>60	8	22			60		>60
137	none	na			60	>60	8	22			60		>60
39T	none	na			60	>60	10	48			60		>60
141	andesite bedrock	na			40	60	8				41	40	60
142	andesite bedrock	na			40	60	8				41	40	60
143	andesite bedrock	na			40	60	8				41	40	60
144	andesite bedrock	na			40	60	8				41	40	60
145	none	na			60	>60	9	51			60		>60
146	none	na			60	>60	9	51			60		>60
147	none	na			60	>60	9	51			60		>60
148	none	na			60	>60	7	17			60		>60
154	none	na			60	>60	10	20	51		60		>60
159	andesite bedrock	na			20	40	4				29	20	40
160	andesite bedrock	na			20	40	4				29	20	40
161	andesite bedrock	na			20	40	4				29	20	40
162	andesite bedrock	na			20	>60	4				29	20	>60
163	andesite bedrock	na			20	>60	4				29	20	>60
164	andesite bedrock	na			20	40	4				29	20	40
181P	andesite bedrock	na			20	40	11				34	20	40
165	andesite bedrock	na			20	40	4				29	20	40
187P	none	na			40	60	9	55			60		>60
166		na											
170	none	48	72		40	60	4				60		>60
172	clay (25)	0	6	25	60	>60	6	14			60		>60
174	andesite bedrock	na			40	60	21	45			50	40	60
175	andesite bedrock	na			40	60	21	45			50	40	60
176	andesite bedrock	na			40	60	21	45			50	40	60
211P	andesite bedrock	na			40	60	10	18	28		47	40	60
211P	andesite bedrock	na			40	60	10	18	28		47	40	60
177	andesite bedrock	na			40	60	21	45			50	40	60
178	siltstone and sandstone bedrock	na			20	40	10				22	20	40
179	siltstone and sandstone bedrock	na			20	40	10				22	20	40
180	outcrop	na											
181	outcrop	na											
184	andesite bedrock	na			20	40	4				29	20	40
185	andesite bedrock	na			20	60	7	20			25	20	40
186		na											
228P	silty clay (32)	6	18	32	60	>60	6	14	27		60		>60
229P	silty clay (32)	6	18	32	60	>60	6	14	27		60		>60

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CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS — Unified Soil Classification System (USCS) — Top horizon Class 1	2	3	4	Material >3 in (%) Min	Max	2nd horizon Class 1	2	3	4	Material >3 in (%) Min	Max	3rd horizon Class 1	2	3	4	Material >3 in (%) Min	Max	4th horizon Class 1	2	3	4	Material >3 in (%) Min	Max
116	CL-ML				0	0	CL				0	0												
118	CL-ML	CL			0	0	ML				0	0												
119	CL-ML	CL			0	0	ML				0	0												
123	SP-SM	SM			0	0	SM				0	0	ML				0	0						
126	CL				0	0	CL	CH			0	0												
127	CL				0	0	CL	CH			0	0												
128	ML				0	0	ML				0	0	M	MH			0	0						
129	ML				0	0	ML				0	0	M	MH			0	0						
149P	SM				0	0	SM	SP-SM			0	0	S	ML			0	5						
136	ML	MH	OL	OH	0	0	SM	ML	MH		0	0												
137	ML	MH	OL	OH	0	0	SM	ML	MH		0	0												
39T	ML	MH			0	0	ML				0	0												
141	SP-SM	SM			0	0																		
142	SP-SM	SM			0	0																		
143	SP-SM	SM			0	0																		
144	SP-SM	SM			0	0																		
145	ML	MH	OL	OH	0	0	ML	MH			0	15												
146	ML	MH	OL	OH	0	0	ML	MH			0	15												
147	ML	MH	OL	OH	0	0	ML	MH			0	15												
148	SM				0	0	SM				0	0												
154	ML				0	0	ML				0	0	CL				0	0						
159	SM	ML	MH		0	0																		
160	SM	ML	MH		0	0																		
161	SM	ML	MH		0	0																		
162	SM	ML	MH		0	0																		
163	SM	ML	MH		0	0																		
164	SM				0	0																		
181P	SM	ML	MH		0	0																		
165	SM				0	0																		
187P	SM				0	0	SM	SP-SM			0	0												
166																								
170	ML				0	0																		
172	ML				0	0	ML	MH			0	0												
174	ML	MH			0	0	ML	SM	MH		0	10												
175	ML	MH			0	0	ML	SM	MH		0	10												
176	ML	MH			0	0	ML	SM	MH		0	10												
211P	ML	MH	OL	OH	0	0	ML	MH			0	5	M	S	MH		0	10						
211P	ML	MH	OL	OH	0	0	ML	MH			0	5	M	S	MH		0	10						
177	ML	MH			0	0	ML	SM	MH		0	10												
178	ML	MH			0	0																		
179	ML	MH			0	0																		
180																								
181																								
184	SM	ML	MH		0	0																		
185	GM	SM			0	0	GM				10	25												
186																								
228P	CL				0	5	CL				0	5	CL	CH			0	5						
229P	CL				0	5	CL				0	5	CL	CH			0	5						

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS USCS (continued) Basal horizon Class 1	2	3	4	Material >3 in (%) Min	Max	D N R STABILITY RATINGS Slope stability Natural General slope gradient class Lo	Med	Hi	Disturbed Lo	Med	Hi	Road stability (cut, fill & sidecast) Lo	Med	Hi	MAP UNIT AREA (acres) General area	Focus area
116	CH				0	0	s			s			na			1387.85	205.87
118	CH				0	0	s			s			na			61.94	61.94
119	CH				0	0	s			s			na			18.01	0
123	SM				0	0	s			s			na			305.83	14.58
126	CL	CH			0	0	s			s			m			874.07	551.49
127	CL	CH			0	0		s			u			m		80.31	49.36
128	ML				0	0	s			s			m			779.76	0
129	ML				0	0		s			u			m		438.78	0
149P	ML	SM			0	5	s			s			na			646.59	0
136	SM	ML	MH		0	0	s			s			sl			1265.68	1047.10
137	SM	ML	MH		0	0	s			s			sl			306.02	265.24
39T	ML				0	0	s			s			sl			4.24	0
141	SM				0	5	s			s			m			27.90	0
142	SM				0	5		s			s			s		17.00	0
143	SM				0	5		s			s			s		614.99	217.55
144	SM				0	5			s			u			s	577.95	354.80
145	GM	SM	ML	MH	10	60	s			s			sl			566.79	378.25
146	GM	SM	ML	MH	10	60		s			s			m		4851.58	3191.88
147	GM	SM	ML	MH	10	60			s			u			m	5129.88	4209.89
148	SM				0	0	s			s			na			548.66	267.84
154	CL				0	0	s			s			m			13.43	13.43
159	GM				15	65	s			s			sl			245.40	59.88
160	GM				15	65		s			s			m		4158.10	1926.51
161	GM				15	65			s			u			m	2556.08	1847.58
162	GM				15	65	s			s			sl			898.52	385.38
163	GM				15	65		s			s			m		3222.39	2330.64
164	GM				15	65		s			s			m		1604.36	602.10
181P	GM				15	65			s			u			m	0.19	0
165	GM				15	65			s			u			m	5367.25	2643.94
187P	SP	GP			5	15	s			s			na			243.57	0
166																20.93	18.17
170	MH	ML			0	0	s			s			na			43.33	43.33
172	CH	MH			0	0	s			s			na			335.79	335.79
174	GM				10	45	s			s			m			30.92	30.92
175	GM				10	45	s			s			m			326.22	279.19
176	GM				10	45		s			s			m		44.68	44.68
211P	GM				10	45	s			s			m			68.23	0
211P	GM				10	45	s			s			m			1.31	0
177	GM				10	45		s			s			m		78.70	78.70
178	ML	MH			0	0	s			s			m			100.59	38.12
179	ML	MH			0	0		s			u			m		318.23	175.44
180																515.52	24.18
181																245.53	71.19
184	GM				15	65			s			u			m	551.39	351.09
185	GM				55	75			s			u			m	709.31	603.12
186																226.63	88.50
228P	CH				0	20	s			s			m			193.87	0
229P	CH				0	20	s			s			m			228.65	0

e

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres) General study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
116	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.15	0.00
118	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
123	4.80	0.00	4.80	0.00	4.80	0.00	0.00	0.00	9.59	0.00	4.80	0.00
126	0.81	0.81	1.62	0.00	0.40	0.00	0.00	0.00	1.21	0.81	1.62	0.00
127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
129	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
136	0.19	0.19	0.19	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.19	0.00
137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
141	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
143	0.26	0.26	1.56	0.26	0.26	0.00	0.00	0.00	0.52	0.26	1.56	0.26
144	0.56	1.12	3.64	0.28	0.28	0.28	0.28	0.28	0.84	1.40	3.92	0.56
145	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.39	0.00	0.00	0.00
146	0.31	0.23	0.42	0.00	0.08	0.00	0.31	0.00	0.38	0.23	0.73	0.00
147	0.72	0.14	0.97	0.00	0.29	0.04	0.40	0.00	1.01	0.18	1.37	0.00
148	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.37	0.00	0.00	0.00
154	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	0.00	0.00	0.00	0.00	0.73	0.00	0.73	0.00	0.73	0.00	0.73	0.00
160	0.58	0.16	1.15	0.00	0.33	0.00	0.45	0.00	0.91	0.16	1.60	0.00
161	0.69	0.44	2.45	0.06	0.19	0.13	0.31	0.00	0.88	0.57	2.76	0.06
162	0.00	0.00	0.21	0.00	0.21	0.21	0.00	0.00	0.21	0.21	0.21	0.00
163	0.64	0.12	0.58	0.00	0.23	0.00	0.12	0.00	0.87	0.12	0.70	0.00
164	1.19	0.76	0.43	0.00	0.65	0.00	0.22	0.11	1.84	0.76	0.65	0.11
181P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	1.43	1.68	4.00	0.11	0.57	0.11	0.96	0.07	2.00	1.78	4.96	0.18
187P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1.41	0.00	1.41	0.00	2.83	0.00	0.00	0.00	4.24	0.00	1.41	0.00
174	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	3.30	0.00	0.00	0.00	0.83	0.00	0.00	0.00	4.13	0.00	0.00	0.00
176	0.00	3.58	3.58	0.00	0.00	0.00	0.00	0.00	0.00	3.58	3.58	0.00
211P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
211P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177	0.00	0.00	0.00	0.00	3.26	0.00	0.00	3.26	3.26	0.00	0.00	3.26
178	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	0.00	0.00	0.00
179	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.00
180	0.00	0.00	0.91	0.00	0.00	0.00	1.82	0.00	0.00	0.00	2.74	0.00
181	3.26	1.30	11.73	0.00	0.00	0.00	0.65	1.30	3.26	1.30	12.38	1.30
184	0.58	0.00	0.88	0.29	0.88	0.00	4.09	0.00	1.46	0.00	4.97	0.29
185	0.23	0.00	2.05	1.60	0.68	0.00	0.91	0.23	0.91	0.00	2.97	1.83
186	0.00	0.00	1.41	0.00	0.00	0.00	4.94	0.00	0.00	0.00	6.35	0.00
228P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
229P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

f

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres)											
	Focus study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
116	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
118	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	-	-	-	-	-	-	-	-	-	-	-	-
123	0.00	0.00	10.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.97	0.00
126	0.87	0.87	1.45	0.00	0.58	0.00	0.00	0.00	1.45	0.87	1.45	0.00
127	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
128	-	-	-	-	-	-	-	-	-	-	-	-
129	-	-	-	-	-	-	-	-	-	-	-	-
149P	-	-	-	-	-	-	-	-	-	-	-	-
136	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.00
137	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39T	-	-	-	-	-	-	-	-	-	-	-	-
141	-	-	-	-	-	-	-	-	-	-	-	-
142	-	-	-	-	-	-	-	-	-	-	-	-
143	0.74	0.00	2.21	0.00	0.74	0.00	0.00	0.00	1.47	0.00	2.21	0.00
144	0.00	0.00	0.92	0.00	0.46	0.46	0.00	0.00	0.46	0.46	0.92	0.00
145	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.60	0.00	0.00	0.00
146	0.35	0.29	0.47	0.00	0.00	0.00	0.35	0.00	0.35	0.29	0.82	0.00
147	0.67	0.18	0.80	0.00	0.36	0.04	0.40	0.00	1.02	0.22	1.20	0.00
148	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.60	0.00	0.00	0.00
154	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	0.00	0.00	0.00	0.00	0.00	0.00	2.67	0.00	0.00	0.00	2.67	0.00
160	0.71	0.18	2.04	0.00	0.00	0.00	0.36	0.00	0.71	0.18	2.40	0.00
161	0.98	0.53	3.11	0.09	0.09	0.00	0.09	0.00	1.07	0.53	3.20	0.09
162	0.00	0.00	0.42	0.00	0.42	0.00	0.00	0.00	0.42	0.00	0.42	0.00
163	0.75	0.15	0.67	0.00	0.30	0.00	0.15	0.00	1.05	0.15	0.82	0.00
164	0.80	0.53	0.53	0.00	0.00	0.00	0.27	0.00	0.80	0.53	0.80	0.00
181P	-	-	-	-	-	-	-	-	-	-	-	-
165	1.83	1.13	5.91	0.26	0.52	0.09	1.13	0.00	2.35	1.22	7.04	0.26
187P	-	-	-	-	-	-	-	-	-	-	-	-
166	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1.41	0.00	1.41	0.00	2.83	0.00	0.00	0.00	4.24	0.00	1.41	0.00
174	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	6.22	0.00	0.00	0.00	2.07	0.00	0.00	0.00	8.30	0.00	0.00	0.00
176	0.00	3.58	3.58	0.00	0.00	0.00	0.00	3.58	0.00	3.58	3.58	3.58
211P	-	-	-	-	-	-	-	-	-	-	-	-
211P	-	-	-	-	-	-	-	-	-	-	-	-
177	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
178	4.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.20	0.00	0.00	0.00
179	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
181	0.00	0.00	6.74	4.50	0.00	0.00	0.00	0.00	0.00	0.00	6.74	4.50
184	0.00	0.00	0.92	0.46	0.92	0.00	5.53	0.00	0.92	0.00	6.45	0.46
185	0.27	0.00	2.42	1.88	0.81	0.00	1.08	0.27	1.08	0.00	3.50	2.15
186	0.00	0.00	3.62	0.00	0.00	0.00	5.42	0.00	0.00	0.00	9.04	0.00
228P	-	-	-	-	-	-	-	-	-	-	-	-
229P	-	-	-	-	-	-	-	-	-	-	-	-

g

APPENDIX IV. SOILS DATA (SEE EXPLANATION)

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS: Soil unit identification numbers: DNR / FLGP: Central region #	DNR / FLGP: S P S region #	SCS county soil surveys: Lewis #	Pierce #	Thurston #	Soil unit name (series, phase)	Slope range (%): SCS Lo	SCS Hi	DNR Lo	DNR Hi
230P		7202		230		Scamman silt loam, 30-45% (30-65% PC)	30	65	30	45
194	7205		194			Scamman silty clay loam, 5-15%	5	15	5	15
195	7207		195			Scamman silty clay loam, 15-30%	15	30	15	30
196	7221		196			Schneider very gravelly silt loam, 8-30%	8	30	8	30
197	7222		197			Schneider very gravelly silt loam, 30-65%	30	65	30	65
198	7223		198			Schneider very gravelly silt loam, 65-90%	65	90	65	90
199	7224		199			Schneider-Baumgard complex, 8-30%	8	30	8	30
200	7225		200			Schneider-Baumgard complex, 30-65%	30	65	30	65
201	7226		201			Schneider-Baumgard complex, 65-90%	65	90	65	90
202	7230		202			Schneider-rock outcrop complex, 30-65%	30	65	30	65
203	7231		203			Schneider-rock outcrop complex, 65-90%	65	90	65	90
204	7237		204			Schooley silt loam (0-3%)	0	3	0	3
205	7294		205			Semiahmoo muck (0-2%)	0	1	0	2
208	7393		208			Skate cindery loamy sand, 0-30%	0	30	0	30
214	7525		214			Stahl very gravelly silt loam, 8-30%	8	30	8	30
215	7526		215			Stahl very gravelly silt loam, 30-65%	30	65	30	65
216	7527		216			Stahl very gravelly silt loam, 65-90%	65	90	65	90
217	7529		217			Stahl-Reichel complex, 30-65%	30	65	30	65
218	7530		218			Stahl-rock outcrop complex, 8-30%	8	30	8	30
219	7531		219			Stahl-rock outcrop complex, 30-65%	30	65	30	65
220	7533		220			Stahl-rock outcrop complex, 65-90%	65	90	65	90
230	8714		230			Vailton silt loam, 8-30%	8	30	8	30
231	8715		231			Vailton silt loam, 30-65%	30	65	30	65
232	8716		232			Vailton silt loam, 65-90%	65	90	65	90
233	8719		233			Vailton-rock outcrop complex, 65-90%	65	90	65	90
234	8717		234			Vailton Variant loam, 30-65%	30	65	30	65
235	8718		235			Vailton Variant-rock outcrop complex, 65-90%	65	90	65	90
236	8773		236			Voight gravelly silt loam, 8-30%	8	30	8	30
271P		8776		271		Voight silt loam, 15-30%	15	30	15	30
272P		8777		272		Voight silt loam, 30-65%	30	65	30	65
241	9110		241			Wilkeson loam, 8-30%	8	30	8	30
275P		9105		275		Wilkeson gravelly silt loam, 6-15%	6	15	6	15
277P		9107		277		Wilkeson gravelly silt loam, 30-45%	30	45	30	45
242	9140		242			Winston loam, 0-8%	0	8	0	8
243	9136		243			Winston gravelly loam, 0-8%	0	8	0	8
244	9137		244			Winston gravelly loam, 8-15%	8	15	8	15
264P		9411		264		xerochrepts,45-70%(typic haplorthod,35-100% PC)	35	100	45	70
247	9425		247			xerorthents, spoils	0	20		
250	9820		250			Zynbar gravelly silt loam, 8-30%	8	30	8	30
251	9821		251			Zynbar gravelly silt loam, 30-65%	30	65	30	65
282P		9828		282		Zynbar loam, 6-30%	6	30	6	30
283P		9829		283		Zynbar loam, 30-65%	30	65	30	65
254	9835		254			Zynbar Variant silt loam, 8-30%	8	30	8	30
	WATER					open water				

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS	
	Landforms	Parent materials
230P	glciofluvial terraces, plains and escarpments	old glacial drift residuum
194	glciofluvial terraces, plains and escarpments	old glacial drift residuum
195	glciofluvial terraces, plains and escarpments	old glacial drift residuum
196	uplands	basalt or andesite colluvium
197	uplands	basalt or andesite colluvium
198	uplands	basalt or andesite colluvium
199	upland benches, ridgetops, and mountainsides	andesite colluvium and residuum
200	upland benches, ridgetops, and mountainsides	andesite colluvium and residuum
201	upland benches, ridgetops, and mountainsides	andesite colluvium and residuum
202	uplands	basalt or andesite colluvium
203	uplands	basalt or andesite colluvium
204	depressions in flood plains	silty alluvium and sandy ash over muck
205	depressions in glacial till plains and drainages	organic material
208	glaciofluvial terraces and terrace escarpments	pumice and ash over glacial outwash
214	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
215	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
216	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
217	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
218	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
219	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
220	ridgetops, mountainsides and escarpments	andesite and ash residuum and colluvium
230	upland benches, ridgetops, and mountainsides	siltstone, sandstone, ash residuum-colluvium
231	upland benches, ridgetops, and mountainsides	siltstone, sandstone, ash residuum-colluvium
232	upland benches, ridgetops, and mountainsides	siltstone, sandstone, ash residuum-colluvium
233	upland benches, ridgetops, and mountainsides	siltstone, sandstone, ash residuum-colluvium
234	mountainsides and ridgetops	coarse sandstone-ash residuum and colluvium
235	mountainsides and ridgetops	coarse sandstone-ash residuum and colluvium
236	upland benches, mountainsides and broad ridgetops	weathered andesite and basalt residuum
271P	upland benches, mountainsides and broad ridgetops	weathered andesite and basalt residuum
272P	upland benches, mountainsides and broad ridgetops	weathered andesite and basalt residuum
241	upland benches, mountainsides and broad ridgetops	weathered andesite and basalt residuum
275P	upland benches, hillsides and broad ridgetops	weathered andesite and basalt residuum
277P	upland benches, hillsides and broad ridgetops	weathered andesite and basalt residuum
242	stream and river terraces	alluvial ash over outwash sand and gravel
243	stream and river terraces	alluvial ash over outwash sand and gravel
244	stream and river terraces	alluvial ash over outwash sand and gravel
264P	ridgetops, side-slopes and escarpments	glacial drift and scattered rock outcrops
247	coal mine spoil areas	siltstone, sandstone, coal, spoils
250	glaciated uplands, mountainsides, broad ridgetops	weathered ash and basic igneous rocks
251	glaciated uplands, mountainsides, broad ridgetops	weathered ash and basic igneous rocks
282P	glaciated uplands, mountainsides, broad ridgetops	weathered ash and basic igneous rocks
283P	glaciated uplands, mountainsides, broad ridgetops	weathered ash and basic igneous rocks
254	upland benches, mountainsides and broad ridgetops	tuff and ash residuum and colluvium
	lakes, ponds, and rivers	

b

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS												
	Subsurface hydrology			Rooting depth (in) (few = most roots above that depth)			Soil depth						
	Restrictive layer (minimum depth, inches)	Depth to water table (inches)					SCS (horizons)					DNR	
		Min	Max	Few	Min	Max	Top	2	3	4	Base	Min	Max
230P	silty clay (32)	6	18	32	60	>60	6	14	27		60		>60
194	silty clay (32)	6	18	32	60	>60	6	13	23		60		>60
195	silty clay (32)	6	18	32	60	>60	6	13	23		60		>60
196	basalt bedrock	na	na		40	70	6	30			45	40	70
197	basalt bedrock	na	na		40	70	6	30			45	40	70
198	basalt bedrock	na	na		40	70	6	30			45	40	70
199	andesite bedrock	na	na		40	60	6	30			45	40	>60
200	andesite bedrock	na	na		40	60	6	30			45	40	>60
201	andesite bedrock	na	na		40	60	6	30			45	40	>60
202	basalt bedrock	na	na		40	70	6	30			45	40	70
203	basalt bedrock	na	na		40	70	6	30			45	40	70
204	organic muck (40)	0	6	31	60	>60	6	21	31	40	60		>60
205	none	0	12		20	30	12				60		>60
208	droughty pumice, sand and gravel (49)		>40	46	60	>60	7	15	39		60		>60
214	andesite bedrock	na			20	40	7	20			25	20	40
215	andesite bedrock	na			20	40	7	20			25	20	40
216	andesite bedrock	na			20	40	7	20			25	20	40
217	andesite bedrock	na			20	60	7	20			25	20	40
218	andesite bedrock	na			20	60	7	20			25	20	40
219	andesite bedrock	na			20	60	7	20			25	20	40
220	andesite bedrock	na			20	60	7	20			25	20	40
230	siltstone and sandstone bedrock	na			40	60	9	18			45		>60
231	siltstone and sandstone bedrock	na			40	60	9	18			45		>60
232	siltstone and sandstone bedrock	na			40	60	9	18			45		>60
233	siltstone and sandstone bedrock	na			40	60	9	18			45	40	60
234	sandstone bedrock	na			40	60	5	19			43	40	60
235	sandstone bedrock	na			40	60	5	19			43	40	60
236	none	na			60	>60	4	19			60		>60
271P	none	na			60	>60	11	43	58		60		>60
272P	none	na			60	>60	11	43	58		60		>60
241	none	na			20	40	4				60		>60
275P	none	na			60	>60	8	16	34		60		>60
277P	none	na			60	>60	8	16	34		60		>60
242	droughty sand and gravel (35)	na			20	40	4	35			60		>60
243	droughty sand and gravel (35)	na			20	40	4	35			60		>60
244	droughty sand and gravel (35)	na			20	40	4	35			60		>60
264P	glacial till or bedrock	na			20	40	3				45	20	40
247					60	>60	6				60		
250	none	na			60	>60	13	45			60		>60
251	none	na			60	>60	13	45			60		>60
282P	none	na			60	>60	9	29			60		>60
283P	none	na			60	>60	9	29			60		>60
254	tuff bedrock	na			40	>60	11				60	40	>60

c

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS — Unified Soil Classification System (USCS) — Top horizon Class 1	2	3	4	Material >3 in (%) Min	Max	2nd horizon Class 1	2	3	4	Material >3 in (%) Min	Max	3rd horizon Class 1	2	3	4	Material >3 in (%) Min	Max	4th horizon Class 1	2	3	4	Material >3 in (%) Min	Max
230P	CL				0	5	CL				0	5	CL	CH			0	5						
194	CL				0	5	CL				0	5	CL	CH			0	5						
195	CL				0	5	CL				0	5	CL	CH			0	5						
196	GM				0	20	GM				0	40												
197	GM				0	20	GM				0	40												
198	GM				0	20	GM				0	40												
199	GM				0	20	GM				0	40												
200	GM				0	20	GM				0	40												
201	GM				0	20	GM				0	40												
202	GM				0	20	GM				0	40												
203	GM				0	20	GM				0	40												
204	ML				0	0	ML				0	0	SM				0	0	ML				0	0
205	PT				0	0																		
208	SM				0	0	SP				0	0	G	SM			0	10						
214	GM	SM			0	0	GM				10	25												
215	GM	SM			0	0	GM				10	25												
216	GM	SM			0	0	GM				10	25												
217	GM	SM			0	0	GM				10	25												
218	GM	SM			0	0	GM				10	25												
219	GM	SM			0	0	GM				10	25												
220	GM	SM			0	0	GM				10	25												
230	ML	MH	OL	OH	0	0	ML	MH			0	0												
231	ML	MH	OL	OH	0	0	ML	MH			0	0												
232	ML	MH	OL	OH	0	0	ML	MH			0	0												
233	ML	MH	OL	OH	0	0	ML	MH			0	0												
234	ML	MH			0	0	ML	SM	MH		0	0												
235	ML	MH			0	0	ML	SM	MH		0	0												
236	CL-ML	GM	SM-SC	ML	0	10	CL	SC	GC		0	10												
271P	CL-ML	ML			0	5	CL	SC	SM	MH	0	10	CL	S	GC		0	10						
272P	CL-ML	ML			0	5	CL	SC	SM	MH	0	10	CL	S	GC		0	10						
241	ML				0	5																		
275P	CL-ML	ML			0	5	CL-ML	CL			0	10	CL	G	SC		0	5						
277P	CL-ML	ML			0	5	CL-ML	CL			0	10	CL	G	SC		0	5						
242	ML	MH			0	0	ML	GM	SM	MH	0	5												
243	SM	GM			0	0	ML	GM	SM	MH	0	5												
244	SM	GM			0	0	ML	GM	SM	MH	0	5												
264P	GM				0	5																		
247	CL				0	0																		
250	SM	ML	MH		0	5	SM	ML	MH		0	5												
251	SM	ML	MH		0	5	SM	ML	MH		0	5												
282P	ML	MH			0	5	ML	MH			0	5												
283P	ML	MH			0	5	ML	MH			0	5												
254	ML	MH			0	0																		

CO. SOIL UNIT #	GENERAL SOIL CHARACTERISTICS USCS (continued) Basal horizon Class 1	2	3	4	Material >3 in (%) Min	Max	D N R STABILITY RATINGS Slope stability Natural General slope gradient class Lo	Med	Hi	Disturbed Lo	Med	Hi	Road stability (cut, fill & sidecast) Lo	Med	Hi	MAP UNIT AREA (acres) General area	Focus area
230P	CH				0	20		s			u			s		158.96	0
194	CH				0	20	s			s			m			45.19	0
195	CH				0	20	s			s			m			0.00	0
196	GM				0	45	s			s			sl			122.77	0
197	GM				0	45		s			s			m		115.39	13.55
198	GM				0	45			s			u			s	110.87	80.23
199	GM				0	45	s			s			sl			289.02	23.14
200	GM				0	45		s			s			m		724.87	210.26
201	GM				0	45			s			u			m	52.29	0
202	GM				0	45		s			s			m		9.27	0
203	GM				0	45			s			u			m	328.80	192.25
204	PT				0	0	s			s			na			256.90	43.28
205	PT				0	0	s			s			na			841.54	580.17
208	GP-GM	GP			0	0	s			s			m			99.98	6.83
214	GM				55	75	s			s			sl			151.10	115.82
215	GM				55	75		s			s			m		2207.68	1498.31
216	GM				55	75			s			u			m	1260.43	834.52
217	GM				55	75		s			s			m		596.07	596.07
218	GM				55	75	s			s			sl			35.39	35.39
219	GM				55	75		s			s			m		1055.80	821.31
220	GM				55	75			s			u			m	2787.16	1999.07
230	ML	MH			0	0	s			s			m			458.82	299.88
231	ML	MH			0	0		s			u			m		2892.96	1814.20
232	ML	MH			0	0			u			vu			s	1216.01	599.39
233	ML	MH			0	0			u			vu			s	759.80	295.98
234	ML	SM			0	0		s			u			s		172.23	172.23
235	ML	SM			0	0			u			vu			s	104.95	105.02
236	CL	SC	GC		0	10	s			s			sl			0.00	0
271P	CL-ML	GM-GC	CL	SC-SM	0	10	s			s			sl			10.72	0
272P	CL-ML	GM-GC	CL	SC-SM				s			s			m		83.05	0
241	CL	SC			0	10	s			s			m			0.00	0
275P	CL-ML	CL	GC	GM-GC	0	5	s			s			sl			7.89	0
277P	CL-ML	CL	GC	GM-GC	0	5		s			s			m		12.77	0
242	GP				5	15	s			s			na			79.62	0
243	GP				5	15	s			s			m			581.78	0
244	GP				5	15	s			s			m			251.90	251.90
264P	GM				0	5			s			u			s	38.73	0
247	CL	CH			0	0	s			s			s			20.61	20.61
250	ML	MH			0	5	s			s			sl			3791.83	3180.88
251	ML	MH			0	5		s			s			m		2796.77	2674.54
282P	ML	MH			0	5	s			s			sl			244.06	0
283P	ML	MH			0	5		s			s			m		276.62	0
254	ML	MH			0	0	s			s			m			11.30	0
																944.24	41.59

e

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres) General study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
230P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
194	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195	2.10	5.60	5.60	0.00	0.70	0.00	0.70	0.00	2.80	5.60	6.30	0.00
196	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	0.00	0.00	1.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	0.00
198	1.99	1.99	3.99	0.00	0.00	0.00	0.00	0.00	1.99	1.99	3.99	0.00
199	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	1.35	1.35	0.00	0.00
200	1.87	1.56	0.31	0.00	0.31	0.00	0.00	0.00	2.18	1.56	0.31	0.00
201	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	2.14	0.00	8.04	0.00	2.14	0.00	1.61	0.00	4.29	0.00	9.65	0.00
204	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00
215	0.58	0.95	1.46	0.00	0.00	0.07	0.00	0.00	0.58	1.02	1.46	0.00
216	0.38	1.02	0.63	0.00	0.63	0.00	0.76	0.13	1.02	1.02	1.40	0.13
217	4.05	0.00	0.00	0.00	0.00	0.00	2.02	0.00	4.05	0.00	2.02	0.00
218	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	0.63	1.88	0.47	0.16	0.00	0.00	0.00	0.00	0.63	1.88	0.47	0.16
220	0.59	1.18	2.30	0.29	0.18	0.00	0.24	0.12	0.77	1.18	2.53	0.41
230	0.46	0.00	0.00	0.00	0.92	0.00	0.00	0.00	1.38	0.00	0.00	0.00
231	1.14	0.46	1.97	0.00	0.53	0.08	0.30	0.00	1.67	0.53	2.28	0.00
232	0.31	1.38	1.22	0.00	0.61	0.00	0.00	0.15	0.92	1.38	1.22	0.15
233	0.21	2.11	2.32	0.00	0.63	0.00	0.84	0.00	0.84	2.11	3.16	0.00
234	1.86	0.00	5.57	0.00	0.93	0.00	0.00	0.00	2.79	0.00	5.57	0.00
235	3.05	0.00	13.71	0.00	1.52	0.00	1.52	0.00	4.57	0.00	15.24	0.00
236	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
271P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
272P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
241	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
275P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
277P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
242	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243	0.00	0.00	0.00	0.00	0.28	0.00	0.55	0.00	0.28	0.00	0.55	0.00
244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	0.72	0.12	0.60	0.00	0.24	0.00	0.06	0.06	0.96	0.12	0.66	0.06
251	0.49	0.12	0.37	0.00	0.37	0.00	0.74	0.00	0.86	0.12	1.11	0.00
282P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
283P	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
254	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

f

CO. SOIL UNIT #	LANDSLIDE DENSITY (number of landslides/160 acres)											
	Focus study area											
	Disturbed area (stand age <60 yrs)				Undisturbed area (stand age >60 yrs)				Total area			
	Landslide type				Landslide type				Landslide type			
	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff	Deep	Road	Shallow	Cliff
230P	-	-	-	-	-	-	-	-	-	-	-	-
194	-	-	-	-	-	-	-	-	-	-	-	-
195	-	-	-	-	-	-	-	-	-	-	-	-
196	-	-	-	-	-	-	-	-	-	-	-	-
197	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
198	1.99	1.99	3.99	0.00	0.00	0.00	0.00	0.00	1.99	1.99	3.99	0.00
199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	3.80	3.04	0.76	0.00	0.00	0.00	0.00	0.00	3.80	3.04	0.76	0.00
201	-	-	-	-	-	-	-	-	-	-	-	-
202	-	-	-	-	-	-	-	-	-	-	-	-
203	0.00	0.00	9.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99	0.00
204	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
205	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
208	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
214	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
215	0.43	1.17	1.50	0.00	0.00	0.11	0.00	0.00	0.43	1.28	1.50	0.00
216	0.38	1.34	0.77	0.00	0.38	0.00	0.19	0.19	0.77	1.34	0.96	0.19
217	4.05	0.00	0.00	0.00	0.00	0.00	2.02	0.00	4.05	0.00	2.02	0.00
218	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
219	0.41	1.02	0.20	0.20	0.00	0.00	0.00	0.00	0.41	1.02	0.20	0.20
220	0.58	1.33	2.74	0.41	0.17	0.08	0.91	0.08	0.75	1.41	3.65	0.50
230	0.00	0.00	0.00	0.00	1.07	0.00	0.00	0.00	1.07	0.00	0.00	0.00
231	1.24	0.53	1.86	0.00	0.44	0.09	0.44	0.00	1.69	0.62	2.31	0.00
232	0.27	2.14	2.14	0.00	1.07	0.00	0.00	0.27	1.33	2.14	2.14	0.27
233	0.54	3.24	3.24	0.00	1.08	0.00	0.54	0.00	1.62	3.24	3.78	0.00
234	1.86	0.00	5.57	0.00	0.93	0.00	0.00	0.00	2.79	0.00	5.57	0.00
235	3.05	3.05	13.71	0.00	1.52	0.00	1.52	0.00	4.57	3.05	15.24	0.00
236	-	-	-	-	-	-	-	-	-	-	-	-
271P	-	-	-	-	-	-	-	-	-	-	-	-
272P	-	-	-	-	-	-	-	-	-	-	-	-
241	-	-	-	-	-	-	-	-	-	-	-	-
275P	-	-	-	-	-	-	-	-	-	-	-	-
277P	-	-	-	-	-	-	-	-	-	-	-	-
242	-	-	-	-	-	-	-	-	-	-	-	-
243	-	-	-	-	-	-	-	-	-	-	-	-
244	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264P	-	-	-	-	-	-	-	-	-	-	-	-
247	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250	0.78	0.14	0.64	0.00	0.21	0.00	0.07	0.07	0.99	0.14	0.71	0.07
251	0.49	0.16	0.49	0.00	0.49	0.00	0.98	0.00	0.98	0.16	1.47	0.00
282P	-	-	-	-	-	-	-	-	-	-	-	-
283P	-	-	-	-	-	-	-	-	-	-	-	-
254	-	-	-	-	-	-	-	-	-	-	-	-

g