Restoration and Resiliency Treatment Accomplishments
Leading to a More Resilient Forest and Grassland Condition
Original - 10/04/2011 (RF 2470 Direction Letter - 10/12/2011)
(Version 1.2 – 6/27/2012), (Version 1.2 – 1/10/2013), (Version 2.1 – 5/1//2013),
(Version 2.2 – 6/24/2013)

The goal for this accomplishment reporting is to document the treatments we are accomplishing each year that trend vegetation towards resilient desired conditions. **The reports are stratified to identify outcomes based on the diverse tool from the timber harvest program, mechanical treatments other than timber harvest, wildfire, and grassland restoration.**

This report takes advantage of our annual accomplishment reporting in the Forest Service Activity Tracking System (FACTS) and with the addition of adding species composition that is retained after the treatment, will enable us to report which treatments are trending toward the resilient forests we speak to in Desired Conditions in Forest Plans. This report is very similar to the Environmental Management System (EMS) report we developed in 2006-2008. It does not, however, require a target to be developed for restoration or resiliency, but just reports out which treatments trend toward more resilient conditions. As in 2006-2008, the majority of our treatments contribute to this goal. The report will reflect data (spatial and tabular) in FACTS. In addition to an internal accounting of what we have accomplished, we will post the specifics of the resilient treatment to an external facing web site and overlay the spatial coverage that is required of FACTS accomplishments, over a Google Map back drop to demonstrate to our publics what and where we accomplish these treatments.

The intent of the report is to show where we are managing for (restore or maintain) a range of forest and non-forest vegetation desired conditions (commensurate with current disturbance regimes), including the improvement or maintenance of resilient, native wildlife habitat (such as persistent hard snags from ponderosa pine (PP) and western larch (WL)) where such types have decreased in extent throughout the Forest and Region.

- Restoration of forest resiliency (resilience of what, to what, for what, for how long?**)** in an uncertain future climate will require an adaptive management approach to restoration and resiliency treatments at various spatial and temporal scales. There are great uncertainties as we manage under current climate because we don't really know what effect changes in climate may have on disturbance processes, soil moisture deficits, forest tree species distribution, and regeneration potential. However, at this point and time, the species we have identified in this document are the ones most likely to provide the base for future resilient forest and grassland conditions.
- A resilient forest ecosystem is a forest that contains the diversity of composition, size, density and pattern **(of what)** that enable it to cope with changing disturbance processes **(to what)**. This forest ecosystem is capable of providing various ecosystem services such as wildlife and aquatic habitat for a variety of species, clean water, recreation, and carbon sequestration (**for what**) in the short and long term.

This restoration goal can be accomplished through various methods:
Establish or maintain the proportion of shade-intolerant species:

- Artificial and natural regeneration after timber harvest

- Intermediate harvests (mechanical)
- Stand Improvement (precommercial treatments, mechanical)
- Fuels treatments (mechanical, not related to timber harvest, stand improvement, or burning)
- Prescribed burning
- Regeneration establishment after wildfire

Restore presence or dominance of native grasses and shrubs

- Prescribed burning
- Invasive species treatment

Restore pattern through harvest and wildfire

By addressing the following objectives, the Forest or Grassland is also consistent with the **Regional Integrated Restoration and Protection Strategy and a number of recent national initiatives:**

http://www.fs.usda.gov/goto/r1/irps

This restoration/resiliency accomplishment process for vegetation management addresses implementation monitoring for vegetation activities as documented in FACTS.

Objectives:

Purpose: The restoration to a more resilient vegetation condition responds to desired conditions for vegetation in Forest Plans. Making progress in achieving this will include composition, size, density, and will provide more natural patterns of diversity and resiliency to stress and disturbances. Tools engaged to influence this are: regeneration accomplished through planting, seeding or natural regeneration of forest or nonforest communities, prescribed fire or natural ignition wildfire, intermediate harvests using timber sales and or precommercial treatments such as precommercial thinning or other mechanical vegetation treatments in stands where intolerant species are retained, invasive species weed treatments and native species re-establishment to restore altered grasslands or shrublands, and certain unplanned events.

Accomplishment: Acres treated to increase (or sustain existing) the geographic acreage of species that have been in decline due to altered disturbance regimes, and/or acres treated to restore and improve native grassland/shrubland communities.

Tree species or types to focus restoration on are:

- Western white pine (PIMO3) (WP)
- Western larch (LAOC) (WL)
- Ponderosa Pine (PIPO) (PP)
- Aspen (POTR5)
- Whitebark Pine (PIAL) (WBP)
- Subalpine larch (LALY)
- Spruce and/or subalpine fir types that define Lynx winter habitat (PIEN/ABLA)
- Dry Douglas-fir on sites within east-side forests (PSME) (DF)
- Green ash (FRPE)

Forest densities and structure to focus on will be densities that will restore the forest to be more resilient to historical and projected disturbance processes in various size classes including wildlife habitats of concern.

Pattern of the forest to focus on will be ranges of patch sizes that develop a pattern informed by historical disturbance and influenced by projected disturbance by a changing climate. Diversity in the pattern of size classes and arrangement on the landscape that will help create a more resilient landscape should be a focus.

Accomplishment of Objectives (inputs into FACTS)

Accomplishments will be documented by standard reports drawn from the Forest Service Activity Tracking System (FACTS) database. Detailed FACTS reports will show by category, how various restoration treatments are contributing toward attainment of a more resilient forest desired condition. These accomplishments will be pulled into an external facing report to be able to demonstrate our accomplishments to the public. All accomplishments must be reported spatially in FACTS, as well as in the tabular database.

Categories of accomplishment/outcomes summarized in the report:

1. **Acres of regeneration and removal harvests.**
   This category reflects the regeneration harvest "footprint" of accomplished regeneration harvests regardless of the contribution to resiliency objectives.

2. Increase or maintain in the proportion of shade-intolerant trees through **artificial and natural regeneration from prior regeneration harvests.**
   A. Regeneration to feature shade-intolerant tree species. Stands planted, seeded, or naturally regenerated with a minimum of 25% crop trees per acre of western white pine, western larch, ponderosa pine, aspen, green ash, whitebark pine, subalpine larch (or any combination of the species that totals 25%). Examples: 25% WL will meet the target, 10% WP and 15% PP will meet the target, 10% WL, 10% PP, and 5% WP will meet the target, etc.
   B. Regeneration of 25% spruce and/or subalpine fir dominated forests on National Forest Lynx habitat.
   C. Regeneration of minimum 25% DF on east-side Montana Forests.

3. Increase or maintain the proportion of shade-intolerant trees through **intermediate harvest, to reduce forest density.** This is part of the fiscal year harvest footprint. (Planned residual trees (or trees per acre) are used to calculate species composition.)
   A. Any stand that has had intermediate harvest accomplished, and that promotes the increase or maintenance of WP, WL, PP, Aspen, WBP, subalpine larch, or green ash trees to at least 10% residual intolerant crop trees after treatment will be included in meeting the target. For example, increasing PP and WL in a stand with pre-treatment dominance type of DF. A stand that is 90% DF and 10 % WL after treatment will qualify, as will a stand that is 90% WL and 10% DF.
   B. Within Forests with Lynx habitat, intermediate harvests that promote high levels of spruce and/or subalpine fir dominated stand conditions ($\geq$50%) will also meet a restoration objective.

C. On east-side Forests, intermediate harvests in DF stands will qualify.

4. Increase or maintain the proportion of shade-intolerant trees through **stand improvement activities.** (Planned residual trees (or trees per acre) are used to calculate species composition.)

A. Any stand that has had a release or precommercial thinning treatment accomplished, and that promotes the increase or maintenance of WP, WL, PP, Aspen, WBP, subalpine larch, or green ash trees to at least 10% residual intolerant crop trees after treatment will be included in meeting the target. For example if the goal is to increase PP and WL in a stand with pretreatment dominance type of DF, a stand that is 90% DF and 10 % WL after treatment will qualify, as will a stand that is 90% WL and 10% DF.

B. Within Forests with lynx habitat, intermediate harvests that promote high levels of spruce and/or subalpine fir dominated stand conditions (≥50%) will also meet a restoration objective.

C. On east-side Forests, intermediate treatments in DF stands will qualify.

D. Pruning (all species) will be included.

5. Increase or maintain in the proportion of shade-intolerant trees through **mechanical fuels treatments not related to timber harvest.** (Planned residual trees (or trees per acre) are used to calculate species composition.)

A. Any stand that has had a mechanical fuels treatment accomplishment *not related to a timber harvest, stand improvement, or prescribed burning*, and that promotes the increase or maintenance of WP, WL, PP, Aspen, WBP, subalpine larch, or green ash trees to at least 10% residual intolerant crop trees after treatment will be included in meeting the target. For example, this includes increasing PP and WL in a stand with pretreatment dominance type of DF. A stand that is 90% DF and 10% WL after treatment will qualify, as will a stand that is 90% WL and 10% DF.

B. Within Forests with lynx habitat, intermediate harvests that promote high levels of spruce and/or subalpine fir dominated stand conditions (≥50%) will also meet a restoration objective.

C. On east-side Forests, fuels treatments in DF stands will qualify.

D. Pruning (all species) will be included.

6. Increase or maintain the proportion of shade-intolerant trees through **prescribed burning** (ecosystem burning). (Planned residual trees (or trees per acre) are used to calculate species composition.)

A. Any stand that has had prescribed burning or underburning accomplished, and that promotes the increase or maintenance of WP, WL, PP, Aspen, WBP, subalpine larch, or green ash trees to at least 10% residual intolerant crop trees after treatment will be included in meeting the target. As an example, increasing PP and WL in a stand with pre-treatment dominance type of DF. A stand that is 90% DF and 10% WL after treatment will qualify, as will a stand that is 90% WL and 10% DF.

B. On east-side Forests, prescribed burning treatments in DF stands will qualify.

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7. Establishment of key species after **wildfire.**

A. **Artificial and natural regeneration following wildfire -** Regeneration to feature shade-intolerant tree species. Stands planted, seeded, or naturally regenerated with a

minimum of 25% crop trees per acre of WP, WL, PP, Aspen, WBP, subalpine larch, or green ash (or any combination of the species that totals 25%). Examples: 25% WL will meet the target; 10% WP and 15% PP will meet the target; 10% WL, 10% PP, and 5% WP will meet the target; 25% spruce and/or subalpine fir dominated forests on National Forest Lynx habitat will qualify; 25% DF on east-side Montana Forests will meet the target.

B. **Natural recovery following wildfire -** Natural recovery (following natural wildfire ignitions) that produce a trend toward desired conditions are included in this type. The expected presence of specific intolerant species will result in the forest being more resilient.

8. Restore the presence or dominance of **native grass and shrub conditions**. Acres treated that either decrease conifer encroachment or improve native grassland/shrubland communities on non-forest lands through weed treatments and prescribed fire will be included in this target.

9. **Restore pattern** of the forest. Stand harvest treatments and prescribed burn treatments larger than 40 acres will qualify as restoring patch sizes. Wildfire – natural ignition, that meets management objects, will also be considered as restoring patch size. Group selection harvests will qualify where small patches are considered restoration of pattern.

Reporting and Development of Reports. Accomplishments associated with these objectives will be based on tabular and spatial reports developed by the RO from information in the Forest Service Activity Tracking System (FACTS) and the Timber Information Manager (TIM) (for sale volume). The report accomplishment date will be the same as that date required for all accomplishments reported in FACTS.

The link to the reports is:
http://fsweb.r1.fs.fed.us/forest/silv/index.html

The reports are based on the following FACTS codes and fields to be filled out when accomplishment reporting in FACTS.

Category 1 - Current Fiscal Year Regeneration and Removal Harvests as Part of the Harvest Footprint (Volume Displayed from TIM)

Activity	Activity Code Description
4111	Patch Clearcut
4113	Stand Clearcut
4115	Patch Clearcut (with leave trees)
4117	Stand Clearcut (with leave trees)
4131	Shelterwood Establishment Cut (with or without leave trees)
4132	Seed-tree Seed Cut (with and without leave trees)
4141	Shelterwood Removal Cut
4142	Seed-tree Final Cut
4143	Overstory Removal Cut (from advanced regeneration)
4145	Shelterwood Removal Cut (with leave trees)
4146	Seed-tree Removal Cut (with leave trees)
4148	Shelterwood Staged Removal Cut
4151	Single-tree Selection Cut

Activity	Activity Code Description
4152	Group Selection Cut
4175	Two-aged Patch Clearcut (with reserves)
4177	Two-aged Stand Clearcut (with reserves)
4183	Two-aged Seed-tree Seed and Removal Cut (with reserves)
4193	Two-aged Shelterwood Establishment and Removal Cut (with reserves)
4194	Two-aged Shelterwood Establishment Cut (with reserves)
4196	Two-aged Shelterwood Final Removal Cut (with reserves)

Category 2 - Artificial and Natural Regeneration in Subsequent Years after Previous Regeneration Harvests

Seeding and Planting:

Activity	Activity Code Description and Causal Agent
4411	Seed Trees / Causal Agent equals "Harvest"
4412	Fill-in or reseed Trees / Causal Agent equals "Harvest"
4431	Plant Trees / Causal Agent equals "Harvest"
4432	Fill-in or Replant Trees / Causal Agent equals "Harvest"

For planting activities, species information must be filled in on the Vegetation Species Establishment section of the Activities Data Entry form. Species code and actual seedlings/UOM for each species needs to be filled out. Each species in a Subunit ID (SUID) must have the same unit of measure (UOM). When actual seedlings are not known at time of accomplishment reporting (such as with fall planting contracts), planned seedling/UOM for each species must be filled in. Reporting is similar for seeding activities 4411-4412. Seeding lbs or oz per acre will likely be the metric developed for species composition. Volume removed during the sale will be displayed from TIM when planting or seeding follows regeneration harvest codes 4111, 4113, 4115, 4117, 4131, 4132, 4151, 4152, 4175, 4177, 4183, 4193, or 4194.

Natural Regeneration Certification:

Activity	Activity Code Description and Causal Agent
4381	Certification of Natural Regeneration with Site Preparation / Causal Agent equals "Harvest"
4382	Certification of Natural Regeneration without Site Preparation / Causal Agent equals "Harvest"

Species information will be filled out on the Stocking Exam section of the Activity Data Entry form associated with the most recent stocking survey (activity code 4341), which assumes it is for certification. Fill out species code, and # natural/UOM (this should represent crop trees not total trees). Each species within the activity unit must have the same UOM. The stocking exam and the natural regeneration certification activity (4381, 4382) need to be linked based on the "Vegetation Species Establishment Activity" button with the stocking survey. When the button is clicked, the natural regeneration certification activity can be selected from the list of values (LOV). The accomplished date of the natural regeneration certification activity will also display.

Volume removed during the sale will be displayed from TIM when natural regeneration certification follows regeneration harvest codes 4111, 4113, 4115, 4117, 4131, 4132, 4151, 4152, 4175, 4177, 4183, 4193, or 4194.

Category 3 - Intermediate harvests

Intermediate Harvest: (Volume removed during the sale will be displayed from TIM.)

Activity	Activity Code Description
4210	Improvement Cut
4211	Liberation Cut
4220	Commercial Thin
4232	Sanitation Cut

Preparatory Cuts: (Volume removed during the sale will be displayed from TIM.)

Activity	Activity Code Description
4121	Shelterwood Preparatory Cut
4122	Seed-tree Preparatory Cut
4192	Two-aged Preparatory Cut (w/res)

Category 4 - Stand Improvement

Precommercial Thinning:

Activity	Activity Code Description
4521	Precommercial Thin
6103	Wildlife Habitat Precommercial Thinning

Release:

Activity	Activity Code Description
4511	Tree Release and Weed

Pruning:

Activity	Activity Code Description
4530	Prune

For all of the activities above (except activity codes 4530 – pruning activities), fill out the Vegetation Manipulation-Release/Weed/Thinning section of the activity form for leave species. Select leave trees tab, fill out species, **planned number of leave trees** based on your prescription; use the same UOM for each species. (In most cases when noncommercial mechanical fuels treatments are accomplished with fuels funding, the appropriate 4000-series activity code, e.g., 4511 release, is reported with fuels funding and key point 3. Vegetation Management receives integrated credit and Hazardous Fuels Management receives core credit for the accomplishment.)

Category 5 - Fuel Treatments not related to Timber Harvest, Stand Improvement, or Prescribed Burning

Noncommercial Mechanical or Manual Treatment: (With the local qualifier description, % is a wildcard for anything following the percent sign.)

Activity	Activity Code Description and Local Qualifier
1120	Yarding / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1136	Pruning / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1150	Rearrangement of Fuels / NF-SLASHING or NF-SLSHNG%
1152	Compacting/Crushing Fuels / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1153	Piling of Fuels / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1154	Chipping of Fuels / Any natural fuels local qualifier (NATURAL FUELS, NF-%)

Activity	Activity Code Description and Local Qualifier
1160	Thinning / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1180	Fuel Break / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
3380	Visual Resource Slash Treatment /
4540	Control of Understory Vegetation /
6107	Wildlife Habitat Mechanical Treatment /
6130	Wildlife Habitat Create Openings /
6132	Wildlife Habitat Create Corridors /
6133	Wildlife Habitat Slash Treatment /

For all of the activities above (except activity codes 1136 pruning activities), fill out the Vegetation Manipulation-Release/Weed/Thinning section of the activity form for leave species. Select leave trees tab, fill out species, **planned number of leave trees** based on your prescription; use the same UOM for each species. (In most cases when noncommercial mechanical fuels treatments are accomplished with fuels funding, the appropriate 4000-series activity code, e.g., 4511 release, is reported with fuels funding and key point 3 with WFHF funding or key point 6 with NFRR funding. Vegetation Management receives integrated credit and Hazardous Fuels Management receives core credit for the WFHF accomplishments. Vegetation Management receives core credit and Hazardous Fuels Management receives integrated credit with NFRR accomplishments.)

Category 6 - Prescribed Burning

Prescribed Fire:

Activity	Activity Code Description and Local Qualifier
1111	Broadcast Burn / Natural fuels local qualifier not equal to NF-RANGE IMPRVE, NF-SHRUB/GRASS, NF-STAND MOD, or N/A. Activity fuels local qualifiers (AF-) will not count.
1112	Jackpot Burning / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
1113	Underburn / Natural fuels local qualifier not equal to NF-GRASSLAND, NF-RANGE IMPRVE, NF-SHRUB/GRASS, or NF-SHRUBLAND. Activity fuels local qualifiers (ACTIVITY FUELS, AF-%) will not count.
1130	Burning of Piled Material / Any natural fuels local qualifier (NATURAL FUELS, NF-%)
4541	Control of Understory Vegetation – Burning /
6101	Wildlife Habitat Prescribed Fire /

For all of the activities above fill out the Vegetation Manipulation-Release/Weed/Thinning section of the activity form for leave species. Select leave trees tab, fill out species, **planned number of leave trees** based on your prescription; use the same UOM for each species. (In most cases when noncommercial mechanical fuels treatments are accomplished with fuels funding, the appropriate 4000-series activity code, e.g., 4511 release, is reported with fuels funding and key point 3. Vegetation Management receives integrated credit and Hazardous Fuels Management receives core credit for the WFHF accomplishments. Vegetation Management receives core credit and Hazardous Fuels Management receives integrated credit with NFRR accomplishments.)

Category 7 - Regeneration following Wildfire

Artificial and Natural Regeneration following Wildfire (Natural or Human Ignition)

Activity	Activity Code Description and Causal Agent
4411	Seed (Trees) / Causal Agent equals "Fire"
4412	Fill-in Seed or Reseed Trees / Causal Agent equals "Fire"
4431	Plant Trees / Causal Agent equals "Fire"
4432	Fill-in or Replant Trees / Causal Agent equals "Fire"

For planting activities (4431-4432), and causal agent being "Fire", species information must be filled in on the Vegetation Species Establishment section of the Activities Data Entry form. Species code and actual seedlings/UOM for each species needs to be filled out. Each species in a Subunit ID (SUID) must have the same unit of measure (UOM). When actual seedlings are not known at time of accomplishment reporting (such as with fall planting contracts), planned seedling/UOM for each species must be filled in. Reporting is similar for seeding activities (4411-4412), and causal agent being "Fire". Seeding lbs or oz per acre will likely be the metric developed for species composition.

Certification of Natural Regeneration following Wildfire (Natural and Human Ignition)

Activity	Activity Code Description and Causal Agent
4381	Certification of Natural Regeneration with Site Prep / Causal Agent equals "Fire"
4382	Certification of Natural Regeneration without Site Prep / Causal Agent equals "Fire"

For certification of natural regeneration (4381, 4382), species information must be filled out on the Stocking Exam section of the Activity Data Entry form associated with the most recent stocking survey (activity code 4341), which assumes it is for certification. Fill out species code, and # natural/UOM (this should represent crop trees not total trees). Each species within the activity unit must have the same UOM.

Natural Recovery following Wildfire (Natural Ignition Only)

Activity	Activity Description and Local Qualifier
4453 (Causal Agent - "Fire")	Natural Recovery / WSTR WHITE PINE, WESTERN LARCH, PONDEROSA PINE, QUAKING ASPEN, WBP/LIMBER PINE, SPRC/SUBALPN FR, OTHER SPECIES

Activity	Activity Description and Causal Agent Event Name
4453 (Causal Agent - "Fire")	Natural Recovery / Along with the Causal Agent being "Fire". Event Name must include the word "natural". Natural can appear anywhere in the Event Name (beginning, end, middle, etc.). Natural can appear with a capital "N" or a lower case "n". The word "natural" in Event Name will identify the wildfire as a natural ignition wildfire.

For natural recovery (4453 with "Fire" reported as the Causal Agent and the word "natural" appearing in Event Name), the local qualifier needs to identify the most important intolerant species expected for restoration. Natural recovery must follow a natural ignition wildfire. The natural recovery activity is not required to be reported in the same SUID (Subunit ID), or Region, Forest, District, and FACTS ID where the natural ignition wildfire is reported. The natural ignition wildfire will be identified with the word "natural" in Event Name, associated with the 4453 activity and Causal Agent "Fire". The silviculturist must identify the key tree species (one most important to that SUID) anticipated to occur as regeneration that will also provide the most important tree species as seed source in the next generation. That species will

be coded as a local qualifier for natural recovery. The species available are western white pine, larch, ponderosa pine, aspen, and species groups - whitebark pine limber pine, and Engelmann spruce subalpine fir.

Category 8 - Restore Presence of Native Non-Tree Vegetation (Grassland and Shrubland Vegetation Restoration)

Planting/Seeding Shrubs, Forbs, Grasses

Activity	Activity Code Description
4448	Plant or Seed Shrubs, Forbs, Grasses
4449	Replant or Reseed Shrubs, Forbs, Grasses
7030	Seeding Grasses, Forbs and/or Shrubs
7031	Planting Propagules and Cuttings
7032	Seedling Cover Crops or Nursery Crops
7033	Reseeding Grasses, Forbs, and/or Shrubs
7034	Replanting Propagules and Cuttings

Mechanical Treatments

Activity	Activity Code Description and Local Qualifier
1150	Rearrangement of Fuels / NF-SHRB/GRS RES
2400	Tree Encroachment Control /
7051	Natural Regeneration – Soil Preparation /
7065	Re-vegetation Treatments – Vegetation Removal /

Prescribe Burning

Activity	Activity Code Description and Local Qualifier
1111	Broadcast Burning / NF-RANGE IMPRVE, NF-SHRUB/GRASS
1113	Underburn / NF-GRASSLAND, NF-RANGE IMPRVE, NF-SHRUB/GRASS, NF-SHRUBLAND
7015	Site Preparation for Re-vegetation – Prescribed Fire /
7050	Natural Regeneration – Prescribed Fire /

Invasive Species Treatments

Activity	Activity Code Description and Local Qualifier
2510	Invasives – Presticide Application / Any Local Qualifier
2530	Invasives – Mechanical/Physical / Any Local Qualifier
2540	Invasives – Curtural/Fire / Any Local Qualifier
2550	Invasives – Biocontrol, Classic / Any Local Qualifier
2560	Invasives – Biocontrol, Livestock / Any Local Qualifier
7067	Re-vegetation Treatments – Herbicides /

Category 9 - Restore Pattern

Regeneration Harvest: Harvest treatment acres over 40 acres. This will catch 90% of the harvest treatments that require (based on NFMA) the Regional Forester to authorize opening size larger than 40 acres. The remaining 10% are those ≤ (equal to or less than) 40 acre treatments next to an existing opening, will likely not be caught with this report.

Activity	Activity Code Description
4111	Patch Clearcut
4113	Stand Clearcut
4115	Patch Clearcut (with leave trees)
4117	Stand Clearcut (with leave trees)
4131	Shelterwood Establishment Cut (with or without leave trees)

Activity	Activity Code Description
4132	See-tree Seed Cut (with or without leave trees)
4151	Single-tree Selection Cut
4175	Two-aged Patch Clearcut (with reserves)
4177	Two-aged Stand Clearcut (with reserves)
4183	Two-aged Seed-tree Seed and Removal Cut (with reserves)
4193	Two-aged Shelterwood Establishment and Removal Cut (with reserves)
4194	Two-aged Shelterwood Establishment Cut (with reserves)

Group Selection Harvest: Any size group selection will qualify as restoration treatments.

Activity	Activity Code Description
4152	Group Selection Cut

Prescribed Fire: Prescribed fire treatments are greater than 40 acres.

Activity	Activity Code Description and Local Qualifier
1111	Broadcast Burning / NF-STAND MOD
1113	Underburn / NF-STAND MOD

Wildfire - Natural Ignition: Key point (KP) 6 identifies the natural ignition wildfire as meeting land management objectives. Natural ignition wildfire (KP6) is greater than 40 acres.

Activity	Activity Code Description
1117 with (KP6)	Wildfire – Natural Ignition

For all of the harvest activities in any category, sale volume will be displayed from TIM. At this point in time, the average volume/acre removed on a sale basis will be used. Volume in TIM is entered as tons or CCF. Volume in this report is displayed as MBF. Tons are converted to MBF by multiplying tons times 0.2. CCF is converted to MBF by multiplying CCF times 0.5.

Non-Resilient or Not Meeting Specific Criteria Activities

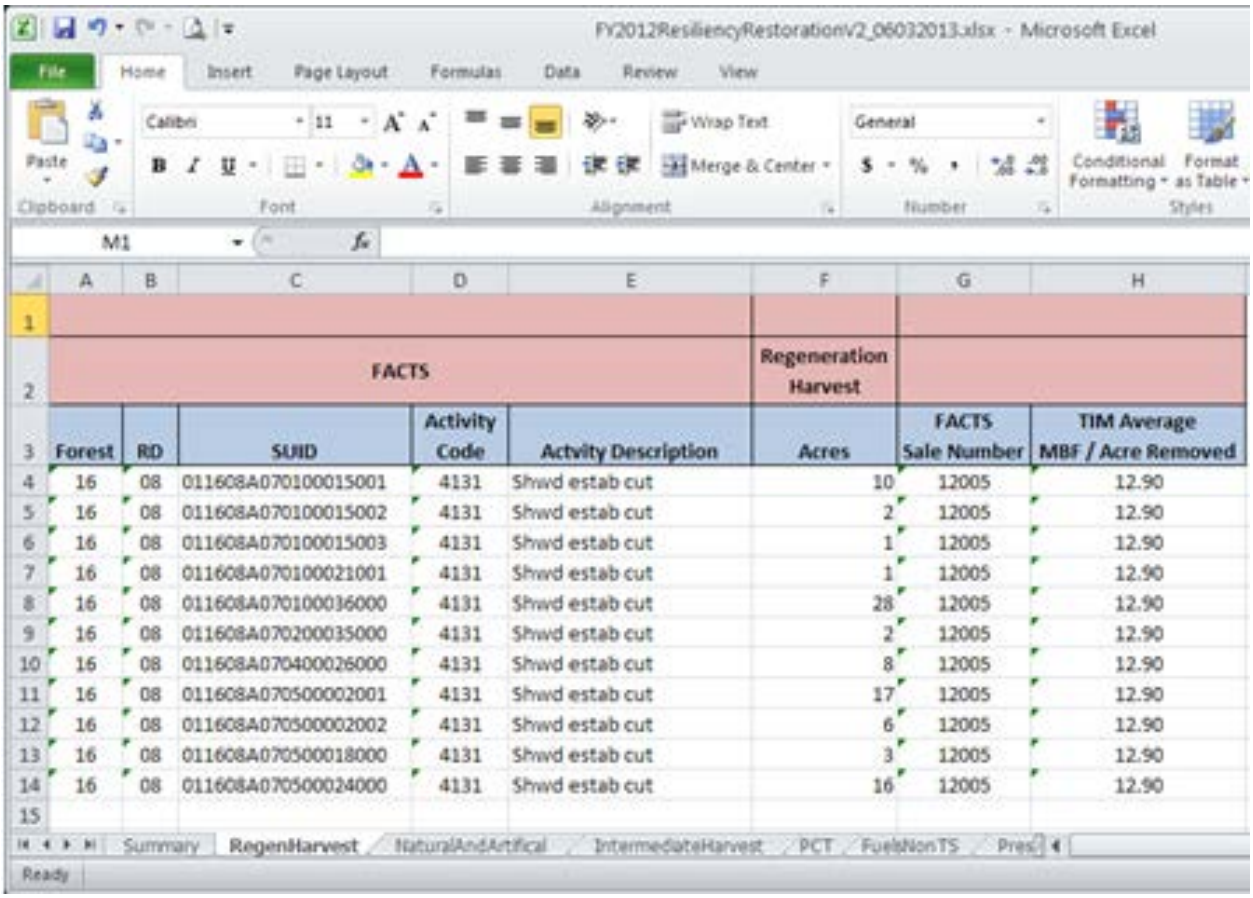
All activities that were looked at in the various accomplishment categories, but that don't restore desired species composition, or that have not met specific criteria such as local qualifier or key point area, are captured in the "ErrorChecking" tab on the report spreadsheet. Some activities on the "ErrorChecking" tab may not have an error in data entry, but may not meet the criteria for the restoration and resiliency report.

R1 Restoration and Resiliency Accomplishment Reports
Trends toward Desired Conditions

SUID Level Tabular and Spatial Report Information to be Displayed

1. FACTS SUID (subunit id) Polygon #
2. TIM Sale Number
3. Treatment Activity Type Categories, output and outcomes

    1. Current Fiscal Year Regeneration and Removal Harvests
        i. Output: acres of treatment accomplished (FACTS)
        ii. Output: volume/ac removed (TIM)
        iii. Outcome: fiscal year footprint of harvest (FACTS)



	A	B	C	D	E	F	G	H
1								
2	FACTS					Regeneration Harvest		
3	Forest	RD	SUID	Activity Code	Actvity Description	Acres	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	08	011608A070100015001	4131	Shwd estab cut	10	12005	12.90
5	16	08	011608A070100015002	4131	Shwd estab cut	2	12005	12.90
6	16	08	011608A070100015003	4131	Shwd estab cut	1	12005	12.90
7	16	08	011608A070100021001	4131	Shwd estab cut	1	12005	12.90
8	16	08	011608A070100036000	4131	Shwd estab cut	28	12005	12.90
9	16	08	011608A070200035000	4131	Shwd estab cut	2	12005	12.90
10	16	08	011608A070400026000	4131	Shwd estab cut	8	12005	12.90
11	16	08	011608A070500002001	4131	Shwd estab cut	17	12005	12.90
12	16	08	011608A070500002002	4131	Shwd estab cut	6	12005	12.90
13	16	08	011608A070500018000	4131	Shwd estab cut	3	12005	12.90
14	16	08	011608A070500024000	4131	Shwd estab cut	16	12005	12.90
15								

2. Artificial and Natural Regeneration in Subsequent Years after Previous Regeneration Harvest
    i. Output: acres of treatment accomplished (FACTS)
    ii. Output: volume/ac removed (from previous harvest) (TIM)
    iii. Outcome: resilient tree species restored or maintained (FACTS)

					Natural and Artifical Regeneration of Resilient Species after Harvest							
FACTS					Intolerant Species		S-AF		Eastside DF		Volume from Previous Harvest	
Forest	RD	SUID	Activity Code	Actvity Description	2A Acres of Treatment	2A Trees by Species	2B Acres of Treatment	2B Trees by Species	2C Acres of Treatment	2C Trees by Species	FACTS Sale Number	TIM Average MBF / Acre Removed
16	03	011603A790300072000	4431	Plant	15	western larch, lodgepole pine,					98003	Not in TIM
16	03	011603A790300073000	4431	Plant	8	lodgepole pine, western larch,					98003	Not in TIM
16	03	011603A790400005000	4431	Plant	8	western larch, lodgepole pine,					98003	Not in TIM
16	03	011603A790400009000	4382	Cert NatRegen wo/SP	16	subalpine fir, western larch, lodgepole pine, Engelmann spruce, Douglas-fir,					98003	Not in TIM
16	03	011603A790400053000	4431	Plant	8	lodgepole pine, western larch,					98003	Not in TIM
16	05	011605A320100021003	4431	Plant	9	western larch, Douglas-fir, ponderosa pine, western white pine,					95001	Not in TIM
16	05	011605A320100021004	4431	Plant	15	western white pine, ponderosa pine, Douglas-fir, western larch,					95001	Not in TIM
16	05	011605A320100027002	4431	Plant	3	Douglas-fir, western white pine, western larch, ponderosa pine,					95001	Not in TIM
16	05	011605A320100028000	4431	Plant	2	western larch, Douglas-fir, western white pine, ponderosa pine,					95001	Not in TIM
16	05	011605A320100032003	4431	Plant	11	ponderosa pine, western white pine, western larch, Douglas-fir,					95001	Not in TIM
16	05	011605A320100032004	4431	Plant	5	western larch, western white pine, Douglas-fir, ponderosa pine,					95001	Not in TIM
16	06	011606A080100036000	4382	Cert NatRegen wo/SP	23	western larch, lodgepole pine, Douglas-fir,					09001	4.25
16	06	011606A100101000001	4431	Plant	15	ponderosa pine,						
16	06	011606A120100034000	4431	Plant	34	western larch,						
16	06	011606A120100071000	4431	Plant	22	western larch,						
16	06	011606A120300096000	4431	Plant	53	western larch,						
16	06	011606A210300084000	4431	Plant	25	western larch,					05005	5.96
16	07	011607A140100058000	4431	Plant	21	western larch, western white pine,					99005	9.25
16	07	011607A230300026000	4431	Plant	18	western larch, western white pine,					08001	14.99
16	07	011607A230300032003	4431	Plant	42	western larch, western white pine,					08001	14.99
16	07	011607A330100008000	4431	Plant	2	ponderosa pine, Douglas-fir, western larch, western white pine,					08001	14.99
16	07	011607A330100012000	4431	Plant	24	western larch, western white pine,					08001	14.99

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3. Increase or maintain the proportion of shade-intolerant trees through intermediate harvest, to reduce forest density
    i. Output: acres of treatment accomplished (FACTS)
    ii. Output: volume/ac removed (TIM)
    iii. Outcome: tree species increased or maintained at a more resilient density trees/ac by species remaining (FACTS)

1						Restoration of species composistion and Density after Intermediate Harvest							
2	FACTS					Intolerant Species		S-AF		Eastside DF		Volume from Previous Harvest	
3	Forest	RD	SUID	Activity Code	Actvity Description	3A Acres of Treatment	3A Trees by Species	3B Acres of Treatment	3B Trees by Species	3C Acres of Treatment	3C Trees by Species	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	08	011608A070100002001	4220	Com Thin	7	western larch, Douglas-fir, ponderosa pine,					12005	12.90
5	16	08	011608A070100004001	4220	Com Thin	46	ponderosa pine, Douglas-fir, western larch,					12005	12.90
6	16	08	011608A070100004002	4220	Com Thin	9	Douglas-fir, ponderosa pine, western larch,					12005	12.90
7	16	08	011608A070100008001	4220	Com Thin	6	ponderosa pine, Douglas-fir, western larch,					12005	12.90
8	16	08	011608A070100008002	4220	Com Thin	35	Douglas-fir, ponderosa pine, western larch,					12005	12.90
9	16	08	011608A070100011000	4220	Com Thin	2	western larch, ponderosa pine, Douglas-fir,					12005	12.90
10	16	08	011608A070100021002	4220	Com Thin	1	Douglas-fir, ponderosa pine, western larch,					12005	12.90
11	16	08	011608A070100034001	4220	Com Thin	14	ponderosa pine, Douglas-fir, western larch,					12005	12.90
12	16	08	011608A070100034002	4220	Com Thin	3	western larch, Douglas-fir, ponderosa pine,					12005	12.90
13	16	[illegible]	011608A070100035001	4220	Com Thin	1	ponderosa pine, Douglas-fir, western larch,					12005	12.90
14	16	[illegible]	011608A070100035002	4220	Com Thin	9	western larch, ponderosa pine, Douglas-fir,					12005	12.90
15	16	08	011608A070100037000	4220	Com Thin	20	ponderosa pine, Douglas-fir, western larch,					12005	12.90
16	16	08	011608A070100039000	4220	Com Thin	13	ponderosa pine, Douglas-fir, western larch,					12005	12.90
17	16	08	011608A070100040001	4220	Com Thin	12	western larch, Douglas-fir, ponderosa pine,					12005	12.90
18	16	08	011608A070100040002	4220	Com Thin	12	ponderosa pine, western larch, Douglas-fir,					12005	12.90
19	16	08	011608A070200011001	4220	Com Thin	9	Douglas-fir, ponderosa pine, western larch,					12005	12.90
20	16	08	011608A070200011002	4220	Com Thin	7	western larch, Douglas-fir, ponderosa pine,					12005	12.90
21	16	08	011608A070200024001	4220	Com Thin	21	western larch, ponderosa pine, Douglas-fir,					12005	12.90
22	16	08	011608A070200024002	4220	Com Thin	5	ponderosa pine, Douglas-fir, western larch,					12005	12.90
23	16	08	011608A070400025000	4220	Com Thin	1	ponderosa pine, western larch, Douglas-fir,					12005	12.90
24	16	08	011608A070400027001	4220	Com Thin	9	Douglas-fir, ponderosa pine, western larch,					12005	12.90
25	16	08	011608A070500001001	4220	Com Thin	11	Douglas-fir, western larch, ponderosa pine,					12005	12.90

Summary / RegenHarvest / NaturalAndArtifical / IntermediateHarvest / PCT / FuelNonTS / Presi

4. Increase or maintain the proportion of shade-intolerant trees through stand improvement activities
    i. Output: acres of treatment accomplished (FACTS)
    ii. Outcome: tree species increased or maintained at a more resilient density trees/ac by species remaining (FACTS)

1						Restoration of Desnsity through Non-Commercial Stand improvement								
2	FACTS					Intolerant Species		S-AF		Eastside DF		Pruning	Volume from Previous Harvest	
3	Forest	RD	SUID	Activity Code	Actvity Description	4A Acres of Treatment	4A Trees by Species	4B Acres of Treatment	4B Trees by Species	4C Acres of Treatment	4C Trees by Species	4D Acres of Treatment	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	04	011604A020200004000	4521	PCT	36	Douglas-fir, ponderosa pine,							
5	16	04	011604A020400006000	4521	PCT	16	Douglas-fir, ponderosa pine,							
6	16	04	011604A020400007000	4521	PCT	40	Douglas-fir, ponderosa pine,							
7	16	04	011604A070300039001	4521	PCT	121	Douglas-fir, ponderosa pine,							
8	16	04	011604A110500005000	4521	PCT	6	ponderosa pine, western larch, lodgepole pine, Douglas-fir,						10001	7.49
9	16	04	011604A110500118000	4521	PCT	12	Douglas-fir, ponderosa pine, lodgepole pine, western larch,						10001	7.49
10	16	04	011604A110500119000	4521	PCT	14	western larch, ponderosa pine, Douglas-fir, lodgepole pine,						10001	7.49
11	16	04	011604A110600001000	4521	PCT	5	western larch, ponderosa pine, lodgepole pine, Douglas-fir,						10001	7.49
12	16	04	011604A110600041001	4521	PCT	4	western larch, ponderosa pine, lodgepole pine, Douglas-fir,						10001	7.49
13	16	04	011604A110600045001	4521	PCT	13	western larch, ponderosa pine, lodgepole pine, Douglas-fir,						10001	7.49
14	16	04	011604A110600048000	4521	PCT	3	Douglas-fir, lodgepole pine, ponderosa pine, western larch,						10001	7.49
15	16	04	011604A120100016000	4521	PCT	1	ponderosa pine, lodgepole pine, Douglas-fir, western larch,						10001	7.49
16	16	04	011604A180300005000	4521	PCT	52	ponderosa pine, western larch, Douglas-fir,						06001	4.48
17	16	04	011604A180300006000	4521	PCT	19	western larch, Douglas-fir, ponderosa pine,						06001	4.48
18	16	04	011604A350200067000	4521	PCT	2	Douglas-fir, ponderosa pine, lodgepole pine, western larch,						10002	7.63
19	16	04	011604A350200069000	4521	PCT	10	ponderosa pine, lodgepole pine, western larch, Douglas-fir,						10002	7.63
20	16	04	011604A350200070000	4521	PCT	3	western larch, ponderosa pine, lodgepole pine, Douglas-fir,						10002	7.63
21	16	04	011604A350200073000	4521	PCT	6	western larch, lodgepole pine, Douglas-fir, ponderosa pine,						10002	7.63
22	16	04	011604A350200074000	4521	PCT	12	Douglas-fir, ponderosa pine, western larch,						10002	7.63
23	16	04	011604A350200075000	4521	PCT	12	western larch, lodgepole pine, ponderosa pine, Douglas-fir,						10002	[illegible]
24	16	04	011604A350200096000	4521	PCT	1	ponderosa pine, western larch, Douglas-fir,						10002	[illegible]
25	16	04	011604A350200100000	4521	PCT	14	Douglas-fir, ponderosa pine, western larch,						10002	7.[illegible]

Summary / RegenHarvest / NaturalAndArtifical / IntermediateHarvest / PCT / FuelsNonTS / Presc

5. Increase or maintain the proportion of shade-intolerant trees through mechanical fuels treatments not completed through a time sale
    i. Output: acres of natural fuels treatment accomplished (FACTS)
    ii. Outcome: tree species increased or maintained at a more resilient density trees/ac by species remaining (FACTS)

1						Restoration of Composition and Density as result of Fuels Treatments Not related to Timber Sales								
2	FACTS					Intolerant Species		S-AF		Eastside DF		Pruning	Volume from Previous Harvest	
3	Forest	RD	SUID	Activity Code	Actvity Description	5A Acres of Treatment	5A Trees by Species	5B Acres of Treatment	5B Trees by Species	5C Acres of Treatment	5C Trees by Species	5D Acres of Treatment	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	07	011607A030100013000	1150	Lop and Scatter	34	ponderosa pine, Douglas-fir,							
5	16	07	011607A060200190000	1150	Lop and Scatter	24	Douglas-fir, ponderosa pine,							
6	16	07	011607A440100025001	1150	Lop and Scatter	3	western larch, ponderosa pine, Douglas-fir,						08004	7.45
7	16	07	011607A440100054001	1150	Lop and Scatter	3	ponderosa pine, Douglas-fir,						08004	7.45
8	16	07	011607A450100002000	1150	Lop and Scatter	9	western larch, ponderosa pine, Douglas-fir,						08004	7.45
9	16	07	011607A450100003001	1150	Lop and Scatter	11	ponderosa pine, Douglas-fir, western larch,						08004	7.45
10	16	07	011607A450100056002	1150	Lop and Scatter	42	ponderosa pine, western larch, Douglas-fir,						08004	7.45
11	16	07	011607A450100056003	1150	Lop and Scatter	5	western larch, Douglas-fir, ponderosa pine,						08004	7.45
12	16	07	011607A450100056004	1150	Lop and Scatter	4	Douglas-fir, ponderosa pine, western larch,						08004	7.45
13	16	07	011607A450100057001	1153	Piling	15	western larch, ponderosa pine, Douglas-fir,						08004	7.45
14	16	07	011607A450100168001	1150	Lop and Scatter	4	ponderosa pine, Douglas-fir, western larch,						08004	7.45
15	16	07	011607A450100169001	1150	Lop and Scatter	2	western larch, ponderosa pine, Douglas-fir,						08004	7.45
16	16	07	011607A450100173001	1150	Lop and Scatter	20	ponderosa pine, western larch, Douglas-fir,						08004	7.45
17	16	07	011607A450100173002	1150	Lop and Scatter	25	western larch, ponderosa pine, Douglas-fir,						08004	7.45
18	16	07	011607A450100173003	1150	Lop and Scatter	4	Douglas-fir, ponderosa pine, western larch,						08004	7.45
19	16	07	011607A450100182000	1150	Lop and Scatter	8	ponderosa pine, western larch, Douglas-fir,						08004	7.45
20	16	07	011607A450100183000	1150	Lop and Scatter	3	ponderosa pine, western larch, Douglas-fir,						08004	7.45
21	16	07	011607A450100184000	1150	Lop and Scatter	5	ponderosa pine, Douglas-fir, western larch,						08004	7.45
22	16	07	011607A620100041000	1150	Lop and Scatter	20	ponderosa pine, Douglas-fir,							
23	16	07	011607A620100502000	1150	Lop and Scatter	19	ponderosa pine, Douglas-fir,							
24	16	07	011607A630200211000	1150	Lop and Scatter	20	Douglas-fir, ponderosa pine,							
25														

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6. Increase or maintain the proportion of shade-intolerant trees through prescribed burning (ecosystem burning)
    i. Output: acres of natural fuels treatment accomplished (FACTS)
    ii. Outcome: tree species increased or maintained for residual intolerant crop trees (FACTS)

1						Restoration of Composition and Structure due to Prescribed Burning							
2	FACTS					Intolerant Species		S-AF		Eastside DF		Volume from Previous Harvest	
3	Forest	RD	SUID	Activity Code	Actvity Description	6A Acres of Treatment	6A Trees by Species	6B Acres of Treatment	6B Trees by Species	6C Acres of Treatment	6C Trees by Species	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	03	011603A640300002002	1113	Underburn	200	ponderosa pine, Douglas-fir,						
5	16	03	011603A640300003002	1113	Underburn	254	Douglas-fir, ponderosa pine,						
6	16	03	011603A640400001001	1113	Underburn	140	Douglas-fir, ponderosa pine,						
7	16	03	011603A640400003000	1113	Underburn	33	ponderosa pine, Douglas-fir,						
8	16	03	011603A650200001000	1113	Underburn	83	ponderosa pine, lodgepole pine, Douglas-fir,						
9	16	03	011603A650200002001	1113	Underburn	266	ponderosa pine, lodgepole pine, Douglas-fir,						
10	16	03	011603A650200010000	1113	Underburn	30	Douglas-fir, lodgepole pine, ponderosa pine,						
11	16	07	011607A020100114000	1113	Underburn	44	Douglas-fir, ponderosa pine,						
12	16	07	011607A050100101000	1113	Underburn	20	ponderosa pine, Douglas-fir,						
13	16	07	011607A050100196000	1113	Underburn	18	Douglas-fir, ponderosa pine,						
14	16	07	011607A050100201000	1113	Underburn	41	ponderosa pine, Douglas-fir,						
15	16	07	011607A050100202000	1113	Underburn	40	ponderosa pine, Douglas-fir,						
16	16	07	011607A050100203000	1113	Underburn	98	Douglas-fir, ponderosa pine,						
17	16	07	011607A050100204000	1113	Underburn	27	ponderosa pine, Douglas-fir,						
18	16	07	011607A050100205000	1113	Underburn	68	Douglas-fir, ponderosa pine,						
19	16	07	011607A050100206000	1113	Underburn	54	Douglas-fir, ponderosa pine,						
20	16	07	011607A050100208000	1113	Underburn	15	ponderosa pine, Douglas-fir,						
21	16	07	011607A190200053000	1113	Underburn	31	ponderosa pine,						
22	16	07	011607A540100019000	1113	Underburn	129	ponderosa pine, Douglas-fir,						
23	16	07	011607A540100091000	1113	Underburn	10	ponderosa pine, Douglas-fir,						
24	16	07	011607A540100092000	1113	Underburn	8	Douglas-fir, ponderosa pine,						
25	16	07	011607A540100093000	1113	Underburn	47	Douglas-fir, ponderosa pine,						

NaturalAndArtifical IntermediateHarvest PCT FuelsNonTS PrescribedBurning Fire Grass

7. Artificial and natural regeneration following wildfire
    i. Output: acres of treatment (FACTS)
    ii. Outcome: resilient tree species restored or maintained (FACTS)

1						Restoration of Species Composition due to Wild Fire									
2	FACTS					Intolerant Species		S-AF		Eastside DF		Natural Recovery		Volume from Previous Harvest	
3	Forest	RD	SUID	Activity Code	Activity Description	7A Acres of Treatment	7A Trees by Species	7B Acres of Treatment	7B Trees by Species	7C Acres of Treatment	7C Trees by Species	7D Acres Of Treatment	7D Species / Groups	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	03	011603A170300036000	4382	Cert NatRegen wo/SP			16	subalpine fir, western larch, lodgepole pine, Engelmann spruce, Dou						
5	16	03	011603A170300040000	4382	Cert NatRegen wo/SP			33	subalpine fir, western larch, lodgepole pine, Engelmann spruce, Dou						
6	16	03	011603A170300041000	4382	Cert NatRegen wo/SP			50							
7	16	03	011603A270500049000	4382	Cert NatRegen wo/SP	100	western larch, lodgepole pine, Engelmann spruce, quaking aspen, Douglas-fir,								
8	16	03	011603A360201009000	4431	Plant	84	ponderosa pine,								
9	16	03	011603A360201010000	4431	Plant	22	ponderosa pine,								
10	16	03	011603A360201018000	4431	Plant	28	ponderosa pine,								
11	16	03	011603A480200045000	4431	Plant	7	lodgepole pine, western larch,							98003	Not in TIM
12	16	04	011604A200101004000	4382	Cert NatRegen wo/SP	17	western larch, ponderosa pine, quaking aspen, Douglas-fir,								
13	16	04	011604A200200004000	4453	Natural Recovery							73	WESTERN L		
14	16	04	011604A330200028000	4382	Cert NatRegen wo/SP	6	subalpine fir, western larch, lodgepole pine, Engelmann spruce, Douglas-fir,								
15	16	04	011604A330200031000	4382	Cert NatRegen wo/SP	17	western larch, lodgepole pine, Engelmann spruce, Douglas-fir,								
16	16	04	011604A430100013000	4453	Natural Recovery							16	PONDEROS		
17	16	04	011604A430100015000	4453	Natural Recovery							20	PONDEROS		
18	16	04	011604A430100016000	4453	Natural Recovery							45	PONDEROS		
19	16	04	011604A430100018000	4453	Natural Recovery							45	N/A		
20	16	04	011604A430100048000	4453	Natural Recovery							19	PONDEROS		
21	16	04	011604A430200011000	4453	Natural Recovery							11	PONDEROS		
22	16	04	011604A430200020000	4453	Natural Recovery							18	PONDEROS		
23	16	04	011604A430200021000	4453	Natural Recovery							7	PONDEROS		
24	16	05	011605A090100004000	4382	Cert NatRegen wo/SP	5	western larch, lodgepole pine,								
25	16	05	011605A090100016000	4382	Cert NatRegen wo/SP	10	western larch, lodgepole pine, Douglas-fir,								

NaturalAndArtifical / IntermediateHarvest / PCT / FuelsNonTS / PrescribedBurning / Fire / Gras

8. Restore presence or dominance of native grass and shrub conditions
    i. Output: acres of treatment (FACTS)
    ii. Outcome: grassland and shrubland vegetation restored (FACTS)

1						Grassland / Shrub Land Restored Through Prescribed Burning or Noxious Weed Treatment
2	FACTS					
3	Forest	RD	SUID	Activity Code	Actvity Description	Acres of Treatment
4	16	03	011603W TR 00015001	2510	Inv Spp Treatment	1.2
5	16	03	011603W TR 00015002	2510	Inv Spp Treatment	1
6	16	03	011603W TR 00015003	2510	Inv Spp Treatment	1
7	16	03	011603WADMRCKCBN001	2510	Inv Spp Treatment	1
8	16	03	011603W_ADM_AFDO000	2510	Inv Spp Treatment	19
9	16	03	011603W_ADM_AFDO001	2510	Inv Spp Treatment	19
10	16	03	011603W_ADM_CTLN000	2510	Inv Spp Treatment	3.5
11	16	03	011603W_GP_BCCRK001	2510	Inv Spp Treatment	1.9
12	16	03	011603W_GP_BCCRK002	2510	Inv Spp Treatment	0.1
13	16	03	011603W_RD_00102001	2510	Inv Spp Treatment	0.2
14	16	03	011603W_RD_00102002	2510	Inv Spp Treatment	28
15	16	03	011603W_RD_00102003	2510	Inv Spp Treatment	2
16	16	03	011603W_RD_00365000	2510	Inv Spp Treatment	72.1
17	16	03	011603W_RD_02149001	2510	Inv Spp Treatment	6.5
18	16	03	011603W_RD_04245002	2510	Inv Spp Treatment	23
19	16	03	011603W_RD_04245003	2510	Inv Spp Treatment	23
20	16	03	011603W_RD_04245003	2510	Inv Spp Treatment	23
21	16	03	011603W_RD_04300002	2510	Inv Spp Treatment	10
22	16	03	011603W_RD_04306001	2510	Inv Spp Treatment	6.4
23	16	03	011603W_RD_04308001	2510	Inv Spp Treatment	10
24	16	03	011603W_RD_09961000	2510	Inv Spp Treatment	25
25	16	03	011603W_RD_09962002	2510	Inv Spp Treatment	12.2

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9. Treatment to restore patch size through harvest, prescribed fire, or wildfire
    i. Output: acres of treatment (FACTS)
    ii. Output: for harvest activities, volume/ac removed (TIM)
    iii. Outcome: patch size restored (FACTS)
        1. Large size restored through even or two ages from over 40 acres CC, ST, SW, stand replacing prescribed burns, or natural ignition wildfire with key point 6
        2. Small size through selection or group selection

						Treatment to Restore Patch Size		
	FACTS						Volume from Previous Harvest	
	Forest	RD	SUID	Activity Code	Actvity Description	Patch Size Restored	FACTS Sale Number	TIM Average MBF / Acre Removed
4	16	04	011604A240200023000	1117	WF Natural Ignition	54		
5	16	04	011604A240200027000	1117	WF Natural Ignition	41		
6	16	06	011606F201200021002	1117	WF Natural Ignition	139		
7	16	06	011606F201201236002	1117	WF Natural Ignition	369		

PCT FuelsNonTS PrescribedBurning Fire GrasslandShrub PatchSize

Summary Forest and Grassland Level Report

1. Output: acres of activity accomplishment by category
2. Outcome: acres of species restored or maintained by treatment type that provides for resiliency
3. Outcome: % of treatment type by category 1-9 that trends the forest toward greater resiliency (Acres that qualify divided by total acres accomplished during the year). Following is an example of the summary report.

	Selected FY Regeneration Harvest	Restoration of Species			Restoration of Species and Densisty			Restoration of Density (Thinning)		
		Restoration of Species Composition through Reforestation after Harvest			Restoration of species composistion and Density after Intermediate Harvest			Restoration of Desnsity through Non-Commercial Stand Improvement		
Forest	Acres	Resilient	Total	%	Resilient	Total	%	Resilient	Total	%
Beaverhead/Deerlodge	11.5	126	126	100%	0	2.5	0%	528.3	1117.3	47%
Bitterroot	0	87	121	72%	1640.7	1736.7	94%	558	565	99%
Idaho Panhandle	1049	636	664	96%	1336	2770	48%	3418	3580	95%
Clearwater	299	271	271	100%	0	765	0%	1989	2165	92%
Custer	0	0	0	0%	0	140.5	0%	691	817.6	85%
Flathead	920	1811	1840	98%	830	1176	71%	294	363	81%
Gallatin	0	7	12	58%	21	21	100%	106.3	106.3	100%
Helena	46	0	127	0%	14	92	15%	0	0	0%
Kootenai	1824	756	756	100%	809	893	91%	2605	3059	85%
Lewis and Clark	0	0	0	0%	0	0	0%	0	0	0%
Lolo	94	546	610	90%	584	584	100%	726	934	78%
Nez Perce	367	127	320	40%	0	738	0%	90	1306	7%
Dakota Prairie Grasslands	0	0	0	0%	0	0	0%	0	0	0%
Total	4610.5	4367	4847	90%	5234.7	8918.7	59%	11005.6	14013.2	79%

Summary / Mechanical / AccomplishedTrees

Continued….

Continued (from scroll to right)

Restoration using Fuels Treatments			Restoration through Perscribed Fire			Restoration of Species Composition due to Wild Fire			Grassland / Shrub Land Restored Through Prescribed Burning or Noxious Weed Treatment	Restoration Treatment to Restore Patch Size and Pattern
Restoration of Composition and Density as result of Fuels Treatments Not related to Timber Sales			Restoration of Composition and Structure due to Prescribed Burning							
Resilient	Total	%	Resilient	Total	%	Resilient	Total	%	Acres	Acres
0	219	0%	0	493	0%	0	409	0%	5712.6	5248
0	2365.3	0%	373	1020	37%	31254.6	67458.1	46%	8408	14366
363	447	81%	390	2355	17%	217	601	36%	4244.7	730
0	107	0%	33	251	13%	1254	2386	53%	4909.6	2766
498.7	544.1	92%	3825	3825	100%	8517	8517	100%	1666.4	1231
369	657.7	56%	1676	1709.7	98%	3892	4948	79%	5073.3	2927
0	0	0%	31	53	58%	725	791	92%	2549.3	0
0	221	0%	189.9	783.6	24%	192	1187	16%	4308.6	777
233	1361	17%	281	3148	9%	192	302	64%	3026.4	1233
324	375.4	86%	742	1521.9	49%	0	100	0%	4585.2	630
280	1055	27%	1855	3681	50%	2151	7949	27%	2929.7	603
0	0	0%	14	14	100%	0	2000	0%	9083.4	13554
0	0	0%	0	0	0%	0	0	0%	26103.4	0
2067.7	7352.5	28%	9409.9	18855.2	50%	48394.6	96648.1	50%	82600.6	44065

Summary Mechanical AccomplishedTrees

Continued (from scroll to right)

Summary of Resilience (potential duplicate acres due to the same activity meeting multiple criteria)		
Resilient Acres	Total Acres	%
11614.9	13327.4	87%
56687.3	96040.1	59%
11334.7	15391.7	74%
11222.6	13620.6	82%
16429.1	16741.6	98%
16872.3	18694.7	90%
3439.6	3532.6	97%
5481.5	7496.2	73%
9135.4	13778.4	66%
6281.2	7212.5	87%
9674.7	18345.7	53%
22868.4	27015.4	85%
26103.4	26103.4	100%
207145.1	277300.3	75%

Additional notes about the summary report: The summary report cannot be added manually. There are possible duplicate acres within categories and across categories 1 (regeneration and removal harvests) and 9 (restore pattern).

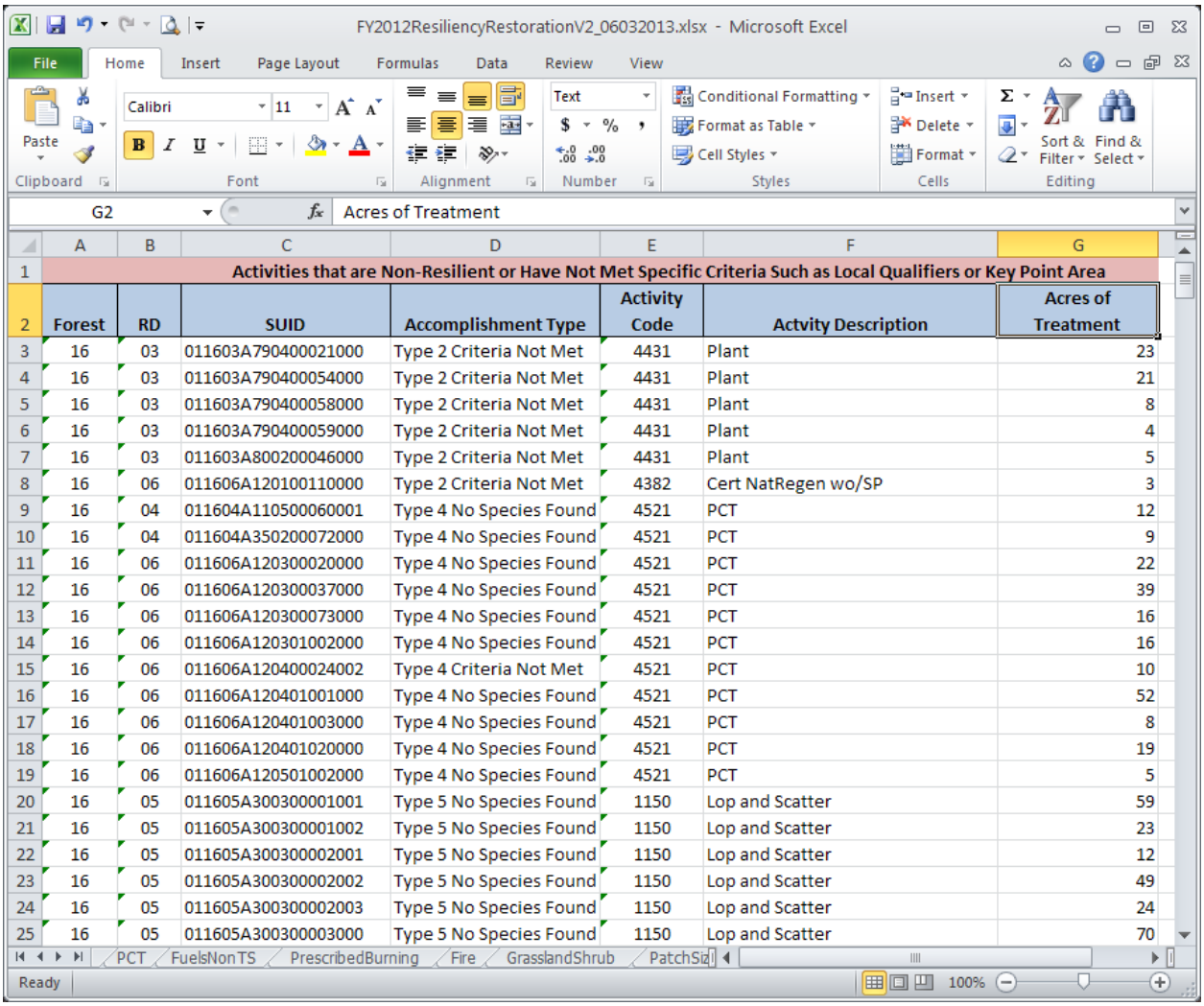
In Category 2 (artificial and natural regeneration), an Eastside Forest could have duplicated resilient acres in 2A (Intolerant Species), 2B (S-AF), and 2C (Eastside DF). Manually summing 2A, 2B, and 2C will generally not result in a total that matches the Category 2 resilient total. If acres are duplicated in 2A, 2B, and 2C, the acres are only counted once in the Category 2 resilient total. Example – Stand 1 is 10 acres. The stand meets resilient criteria for 2A (10 acres), 2B (10 acres), and 2C (10 acres). 30 acres <u>are not</u> added in the resilient total. 10 acres are added in the resilient total (stand acres count once for Category 2 resilient total). If a stand meets the resilient criteria for Category 2A, but does not meet the resilient criteria for 2B or 2C, the stand <u>is not</u> put in the Error Checking report for not meeting 2B or 2C criteria. The stand met the criteria for Category 2, so it is resilient and does not go in the Error Checking report.

If a stand is resilient in Category1 (regeneration and removal harvests) and resilient in Category 9 (restore pattern), the acres are counted as resilient in each category. The total resilient acres for each category are included in the resilient acres in the "Summary of Resilience" column. This is an example of duplicate acres in the "Summary of Resilience" column.

The total resilient acres for each category (Category 1, Category 2, Category 3, Category 4, Category 5, Category 6, Category 7, Category 8, and Category 9) will match the resilient acres in the "Summary of Resilience" column. The total acres for each type will match the total acres in the "Summary of Resilience" column. Duplicate acres could be included in the "Summary of Resilience" column.

Error Checking Report

Output: activities that have not met resilient criteria or have not met specific criteria such as specific local qualifier or key point area



FY2012ResiliencyRestorationV2_06032013.xlsx - Microsoft Excel

G2 | Acres of Treatment

	A	B	C	D	E	F	G
1	Activities that are Non-Resilient or Have Not Met Specific Criteria Such as Local Qualifiers or Key Point Area						
2	Forest	RD	SUID	Accomplishment Type	Activity Code	Actvity Description	Acres of Treatment
3	16	03	011603A790400021000	Type 2 Criteria Not Met	4431	Plant	23
4	16	03	011603A790400054000	Type 2 Criteria Not Met	4431	Plant	21
5	16	03	011603A790400058000	Type 2 Criteria Not Met	4431	Plant	8
6	16	03	011603A790400059000	Type 2 Criteria Not Met	4431	Plant	4
7	16	03	011603A800200046000	Type 2 Criteria Not Met	4431	Plant	5
8	16	06	011606A120100110000	Type 2 Criteria Not Met	4382	Cert NatRegen wo/SP	3
9	16	04	011604A110500060001	Type 4 No Species Found	4521	PCT	12
10	16	04	011604A350200072000	Type 4 No Species Found	4521	PCT	9
11	16	06	011606A120300020000	Type 4 No Species Found	4521	PCT	22
12	16	06	011606A120300037000	Type 4 No Species Found	4521	PCT	39
13	16	06	011606A120300073000	Type 4 No Species Found	4521	PCT	16
14	16	06	011606A120301002000	Type 4 No Species Found	4521	PCT	16
15	16	06	011606A120400024002	Type 4 Criteria Not Met	4521	PCT	10
16	16	06	011606A120401001000	Type 4 No Species Found	4521	PCT	52
17	16	06	011606A120401003000	Type 4 No Species Found	4521	PCT	8
18	16	06	011606A120401020000	Type 4 No Species Found	4521	PCT	19
19	16	06	011606A120501002000	Type 4 No Species Found	4521	PCT	5
20	16	05	011605A300300001001	Type 5 No Species Found	1150	Lop and Scatter	59
21	16	05	011605A300300001002	Type 5 No Species Found	1150	Lop and Scatter	23
22	16	05	011605A300300002001	Type 5 No Species Found	1150	Lop and Scatter	12
23	16	05	011605A300300002002	Type 5 No Species Found	1150	Lop and Scatter	49
24	16	05	011605A300300002003	Type 5 No Species Found	1150	Lop and Scatter	24
25	16	05	011605A300300003000	Type 5 No Species Found	1150	Lop and Scatter	70

PCT / FuelsNonTS / PrescribedBurning / Fire / GrasslandShrub / PatchSiz

Region 1 Summary Report

The Region 1 summary report uses the same information as the individual Forest and Grassland reports, but the information is displayed in one report.

	Selected FY Regeneration Harvest	Restoration of Species			Restoration of Species and Densisty			Restoration of Density (Thinning)			Restoration using Fuels Treatments		
		Restoration of Species Composition through Reforestation after Harvest			Restoration of species composistion and Density after Intermediate Harvest			Restoration of Desnsity through Non-Commercial Stand Improvement			Restoration of Composition and Density as result of Fuels Treatments Not related to Timber Sales		
Forest	Acres	Resilient	Total	%	Resilient	Total	%	Resilient	Total	%	Resilient	Total	%
Beaverhead/Deerlodge	11.5	3	126	2%	0	2.5	0%	528.3	1117.3	47%	0	219	0%
Bitterroot	0	87	121	72%	1640.7	1736.7	94%	558	565	99%	0	2365.3	0%
Idaho Panhandle	1049	636	664	96%	1336	2770	48%	3418	3580	95%	363	447	81%
Clearwater	299	271	271	100%	0	765	0%	1900	2165	88%	0	107	0%
Custer	0	0	0	0%	0	140.5	0%	685.4	812	84%	498.7	544.1	92%
Flathead	920	1797	1840	98%	830	1176	71%	274	363	75%	0	219.7	0%
Gallatin	0	7	7	100%	21	21	100%	106.3	106.3	100%	0	0	0%
Helena	46	0	127	0%	14	92	15%	0	0	0%	0	221	0%
Kootenai	1824	756	756	100%	809	893	91%	1989.4	2623.4	76%	233	1361	17%
Lewis and Clark	0	0	0	0%	0	0	0%	0	0	0%	324	375.4	86%
Lolo	94	548	612	90%	584	584	100%	70	907	8%	20	1051	2%
Nez Perce	367	127	320	40%	0	738	0%	69	1306	5%	0	0	0%
Dakota Prairie Grasslands	0	0	0	0%	0	0	0%	0	0	0%	0	0	0%

Summary / Mechanical / AccomplishedTrees / ErrorReport / RegenHarvest / NaturalAndArtifical

Continued (from scroll to right)

Restoration through Perscribed Fire			Restoration of Species Composition due to Wild Fire			Grassland / Shrub Land Restored Through Prescribed Burning or Noxious Weed Treatment	Restoration Treatment to Restore Patch Size and Pattern	Summary of Resilience (potential duplicate acres due to the same activity meeting multiple criteria)		
Restoration of Composition and Structure due to Prescribed Burning										
Resilient	Total	%	Resilient	Total	%	Acres	Acres	Resilient Acres	Total Acres	%
0	493	0%	0	409	0%	5712.6	5248	11491.9	13327.4	86%
373	1020	37%	31254.6	67458.1	46%	8408	14366	56687.3	96040.1	59%
390	2355	17%	217	601	36%	4244.7	730	11334.7	15391.7	74%
33	251	13%	1254	2386	53%	4909.9	2766	11133.9	13620.9	82%
3825	3825	100%	8517	8517	100%	1666.4	1231	16423.5	16736	98%
1503	1713.7	88%	3820	4948	77%	4785.2	2927	15936.2	17972.6	89%
0	53	0%	312	791	39%	2549.3	0	2995.6	3527.6	85%
189.9	783.6	24%	192	1187	16%	4308.6	777	5481.5	7496.2	73%
281	3148	9%	192	302	64%	3016.4	1233	8509.8	13332.8	64%
742	1521.9	49%	0	100	0%	4585.2	630	6281.2	7212.5	87%
774	3681	21%	2151	7949	27%	2929.7	603	7679.7	18316.7	42%
0	14	0%	0	2000	0%	9083.4	13554	22833.4	27015.4	85%
0	6739	0%	0	0	0%	19364.4	0	19364.4	26103.4	74%

chanical / AccomplishedTrees / ErrorReport / RegenHarvest / NaturalAndArtifical

Example of R1 Summary Report – Mechanical Tab

	Restoration of Species								Restoration of Species and Densisty	
	Restoration of Species Composition through Reforestation after Harvest								Restoration of species composistion and Density after Intermediate Harvest	
	Type 2 Resilient				Type 2 Non Resilient				Type 3 Resilient	Type 3 Non Resilient
Forest	Mechanical	Non Mechanical	Total	%	Mechanical	Non Mechanical	Total	%	Mechanical	Mechanical
Beaverhead/Deerlodge	126	0	126	100%	0	0	0	0%	0	2.5
Bitterroot	0	87	87	0%	0	34	34	0%	1640.7	96
Idaho Panhandle	612	24	636	96%	0	28	28	0%	1336	1434
Clearwater	271	0	271	100%	0	0	0	0%	0	765
Custer	0	0	0	0%	0	0	0	0%	0	140.5
Flathead	1743	68	1811	96%	29	0	29	100%	830	346
Gallatin	7	0	7	100%	5	0	5	100%	21	0
Helena	0	0	0	0%	3	124	127	2%	14	78
Kootenai	751	5	756	99%	0	0	0	0%	809	84
Lewis and Clark	0	0	0	0%	0	0	0	0%	0	0
Lolo	422	124	546	77%	64	0	64	100%	584	0
Nez Perce	127	0	127	100%	110	83	193	57%	0	738
Dakota Prairie Grasslands	0	0	0	0%	0	0	0	0%	0	0
Total	4059	308	4367	93%	211	269	480	44%	5234.7	3684

Summary | Mechanical | AccomplishedTrees

Continued (from scroll to right)

Restoration of Density (Thinning)		Restoration using Fuels Treatments		Restoration through Perscribed Fire		Restoration of Species Composition due to Wild Fire	
Restoration of Desnsity through Non-Commercial Stand improvement		Restoration of Composition and Density as result of Fuels Treatments Not related to Timber Sales		Restoration of Composition and Structure due to Prescribed Burning		Restoration of Species Composition due to Wild Fire	
Type 4 Resilient	Type 4 Non Resilient	Type 5 Resilient	Type 5 Non Resilient	Type 6 Resilient	Type 6 Non Resilient	Type 7 Resilient	Type 7 Non Resilient
Mechanical	Mechanical	Mechanical	Mechanical	Non Mechanical	Non Mechanical	Non Mechanical	Non Mechanical
528.3	589	0	219	0	493	0	409
558	7	0	2365.3	373	647	31254.6	36203.5
3418	162	363	84	390	1965	217	384
1989	176	0	107	33	218	1254	1132
691	126.6	498.7	45.4	3825	0	8517	0
294	69	369	288.7	1676	33.7	3892	1056
106.3	0	0	0	31	22	725	66
0	0	0	221	189.9	593.7	192	995
2605	454	233	1128	281	2867	192	110
0	0	324	51.4	742	779.9	0	100
726	208	280	775	1855	1826	2151	5798
90	1216	0	0	14	0	0	2000
0	0	0	0	0	0	0	0
11005.6	3007.6	2067.7	5284.8	9409.9	9445.3	48394.6	48253.5

Summary | Mechanical | AccomplishedTrees

Continued (from scroll to right)

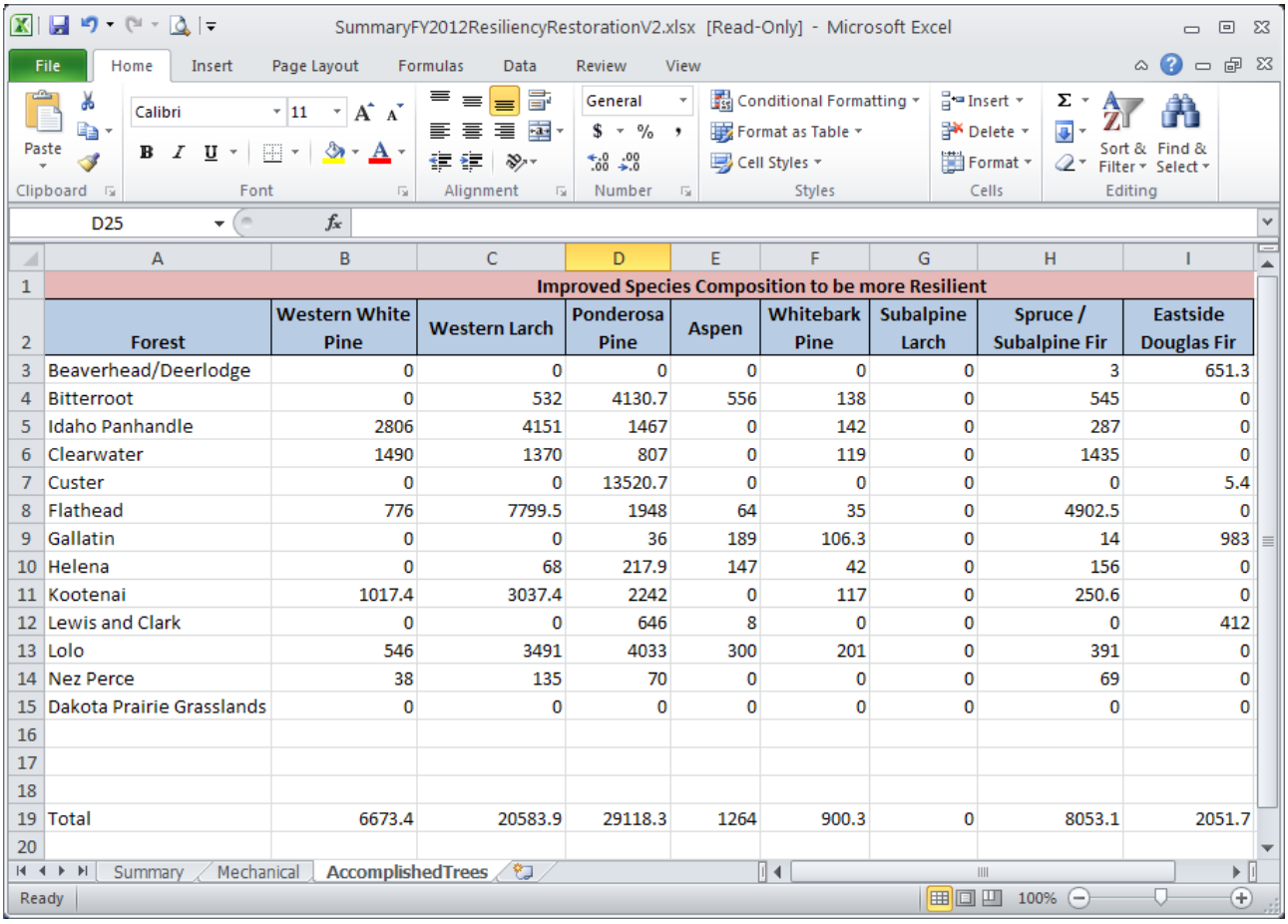
Restoration of Grassland, Shrubland, Vegetation								Restoration of Patch Size and Pattern							
Grassland / Shrub Land Restored Through Prescribed Burning or Noxious Weed Treatment								Treatment to Restore Patch Size							
Type 8 Resilient				Type 8 Non Resilient				Type 9 Resilient				Type 9 Non Resilient			
Mechanical	Non Mechanical	Total	%	Mechanical	Non Mechanical	Total	%	Mechanical	Non Mechanical	Total	%	Mechanical	Non Mechanical	Total	%
0	5712.6	5712.6	0%	0	0	0	0%	0	5248	5248	0%	0	0	0	0%
0	8408	8408	0%	0	0	0	0%	0	14366	14366	0%	0	0	0	0%
26.1	4218.6	4244.7	1%	0	0	0	0%	730	0	730	100%	0	0	0	0%
0	4909.6	4909.6	0%	0	0	0	0%	167	2599	2766	6%	0	0	0	0%
0	1666.4	1666.4	0%	0	0	0	0%	0	1231	1231	0%	0	0	0	0%
561	4512.3	5073.3	11%	0	0	0	0%	251	2676	2927	9%	0	0	0	0%
55.1	2494.2	2549.3	2%	0	0	0	0%	0	0	0	0%	0	0	0	0%
865	3443.6	4308.6	20%	0	0	0	0%	46	731	777	6%	0	0	0	0%
169	2857.4	3026.4	6%	0	0	0	0%	1233	0	1233	100%	0	0	0	0%
143.5	4441.7	4585.2	3%	0	0	0	0%	0	630	630	0%	0	0	0	0%
0	2929.7	2929.7	0%	0	0	0	0%	0	603	603	0%	0	0	0	0%
0	9083.4	9083.4	0%	0	0	0	0%	220	13334	13554	2%	0	0	0	0%
0	26103.4	26103.4	0%	0	0	0	0%	0	0	0	0%	0	0	0	0%
1819.7	80780.9	82600.6	2%	0	0	0	0%	2647	41418	44065	6%	0	0	0	0%

Summary | Mechanical | AccomplishedTrees

Continued (from scroll to right)

Restoration Footprint							
Summary of Resilience (potential duplicate acres due to the same activity meeting multiple criteria)							
Total Resilient				Total Non Resilient			
Mechanical	Non Mechanical	Total	%	Mechanical	Non Mechanical	Total	%
654.3	10960.6	11614.9	6%	810.5	902	1712.5	47%
2198.7	54488.6	56687.3	4%	2468.3	36884.5	39352.8	6%
6485.1	4849.6	11334.7	57%	1680	2377	4057	41%
2427	8795.6	11222.6	22%	1048	1350	2398	44%
1189.7	15239.4	16429.1	7%	312.5	0	312.5	100%
4048	12824.3	16872.3	24%	732.7	1089.7	1822.4	40%
189.4	3250.2	3439.6	6%	5	88	93	5%
925	4556.5	5481.5	17%	302	1712.7	2014.7	15%
5800	3335.4	9135.4	63%	1666	2977	4643	36%
467.5	5813.7	6281.2	7%	51.4	879.9	931.3	6%
2012	7662.7	9674.7	21%	1047	7624	8671	12%
437	22431.4	22868.4	2%	2064	2083	4147	50%
0	26103.4	26103.4	0%	0	0	0	0%
26833.7	180311.4	207145.1	13%	12187.4	57967.8	70155.2	17%

Example of R1 Summary Report – Accomplished Trees Tab

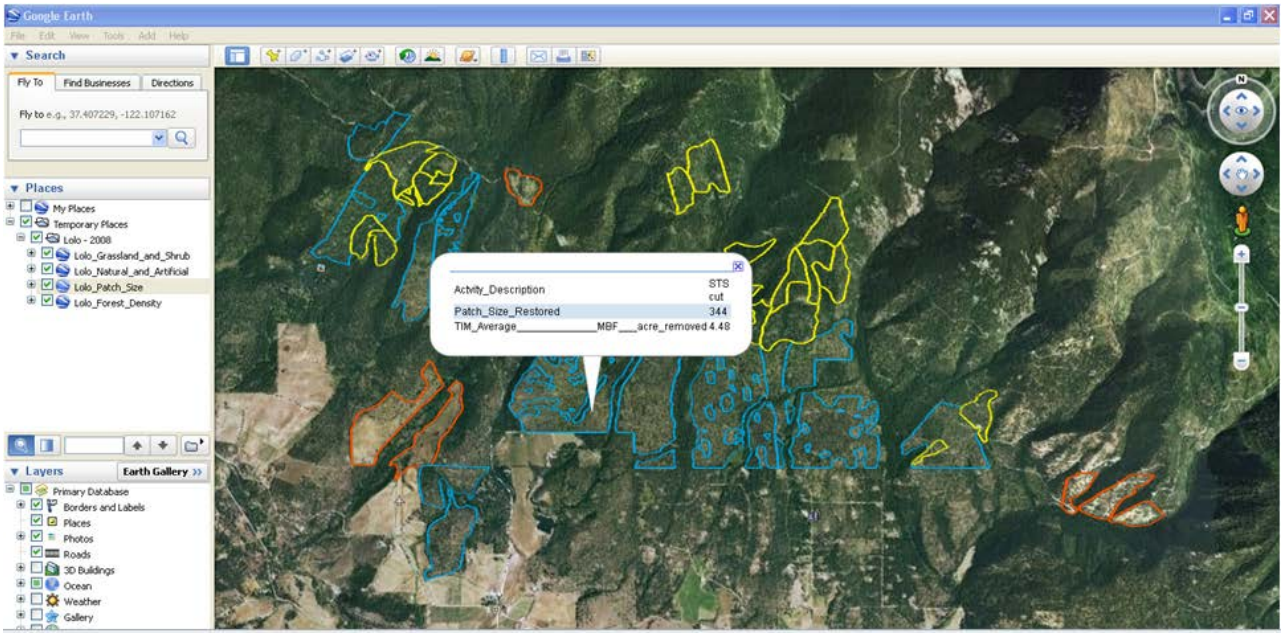
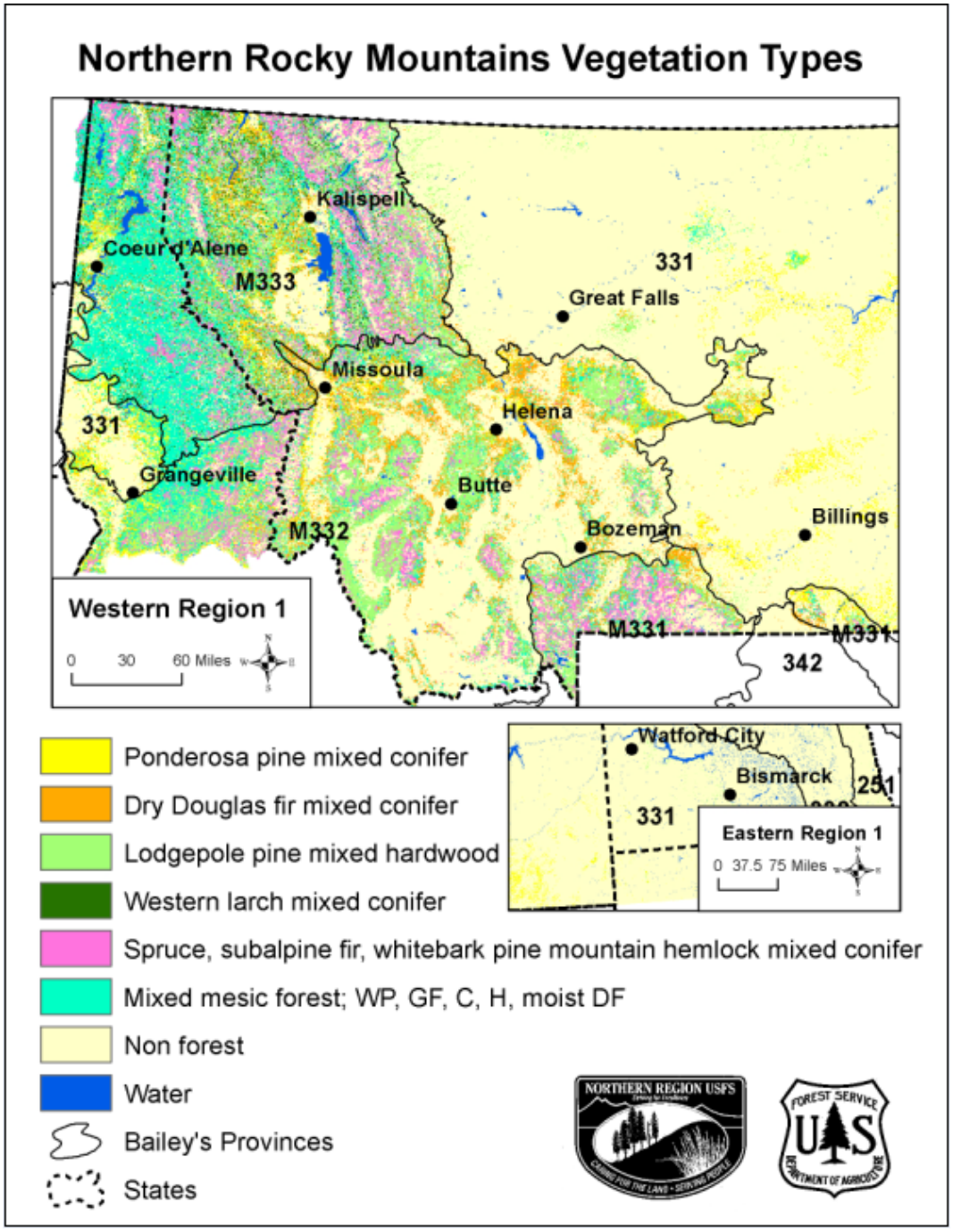


Forest	Western White Pine	Western Larch	Ponderosa Pine	Aspen	Whitebark Pine	Subalpine Larch	Spruce / Subalpine Fir	Eastside Douglas Fir
Improved Species Composition to be more Resilient								
Beaverhead/Deerlodge	0	0	0	0	0	0	3	651.3
Bitterroot	0	532	4130.7	556	138	0	545	0
Idaho Panhandle	2806	4151	1467	0	142	0	287	0
Clearwater	1490	1370	807	0	119	0	1435	0
Custer	0	0	13520.7	0	0	0	0	5.4
Flathead	776	7799.5	1948	64	35	0	4902.5	0
Gallatin	0	0	36	189	106.3	0	14	983
Helena	0	68	217.9	147	42	0	156	0
Kootenai	1017.4	3037.4	2242	0	117	0	250.6	0
Lewis and Clark	0	0	646	8	0	0	0	412
Lolo	546	3491	4033	300	201	0	391	0
Nez Perce	38	135	70	0	0	0	69	0
Dakota Prairie Grasslands	0	0	0	0	0	0	0	0
Total	6673.4	20583.9	29118.3	1264	900.3	0	8053.1	2051.7

External Facing Webpage and Data

This is a spatial representation of FACTS activity polygons over Google Map, combined with a stand level report on a website.

It includes the outputs and outcomes by polygon.



Northern Rocky Mountains Vegetation Types