Southwestern Crown of the Continent
Fire Behavior Analyses for Ecological Indicators
Mid-Project Reporting – 2014

This report summarizes fire behavior metrics for the Southwestern Crown of the Continent CFLRP project based on ecological indicators. Tables 1 and 2 compare predicted fire behavior at the beginning of the CFLRP project (start of FY 2010) versus mid-project (end of FY 2014) for 1) all NFS lands within the SWCC and 2) project areas with planned activities implemented from FY 2010 through 2014. The 97th percentile represents weather and fuel moisture conditions generally associated with potential for large fire growth in this area. Wind values were kept constant for these simulations, ranging from 5-8 mph in the valley bottoms to 16-24 mph along ridgetops with isolated winds of 32 mph. In order to compare 2010 and 2014, spotting was set to zero.

Table 1. *Predicted fire behavior using 90th percentile weather and fuel moisture conditions*

Fire Behavior Metric		NFS Project Areas FY10-14 Activity Footprint (acres | proportion)		NFS Lands in SWCC (acres | proportion)	
		2010	2014	2010	2014
Type of Fire	Non-burnable*	909 | **3%**	1,096 | **3%**	54,782 | **6%**	54,879 | **6%**
	Surface Fire	20,250 | **63%**	30,186 | **94%**	473,089 | **52%**	490,605 | **54%**
	Passive Crown Fire	9,963 | **31%**	627 | **2%**	362,979 | **40%**	345,681 | **38%**
	Active Crown Fire	858 | **3%**	72 | **<1%**	17,037 | **2%**	16,721 | **2%**
Flame Lengths	Non-burnable*	909 | **3%**	1,096 | **3%**	54,782 | **6%**	54,879 | **6%**
	0 – 4 ft	19,449 | **61%**	30,004 | **94%**	469,091 | **52%**	482,512 | **53%**
	4 – 8 ft	2,172 | **7%**	227 | **1%**	75,369 | **8%**	73,937 | **8%**
	8 – 11 ft	799 | **2%**	44 | **<1%**	54,349 | **6%**	52,969 | **6%**
	11 – 20 ft	2,350 | **7%**	120 | **<1%**	101,526 | **11%**	97,243 | **11%**
	> 20 ft	6,282 | **20%**	457 | **1%**	152,751 | **17%**	146,320 | **16%**

*Slight increase in non-burnable acres lies within the footprint of high severity wildfires.

The activity footprints in Table 1 include both planned activities and unplanned activities (most notably, wildfires) that have occurred since October 1, 2010 at the start of the CFLRP. The fire behavior ecological indicators were previously established by the SWCC as a means to evaluate treatment effectiveness. Figures 1 – 4 display maps of predicted flame lengths and fire type on NFS lands for the entire SWCC and each ranger district.

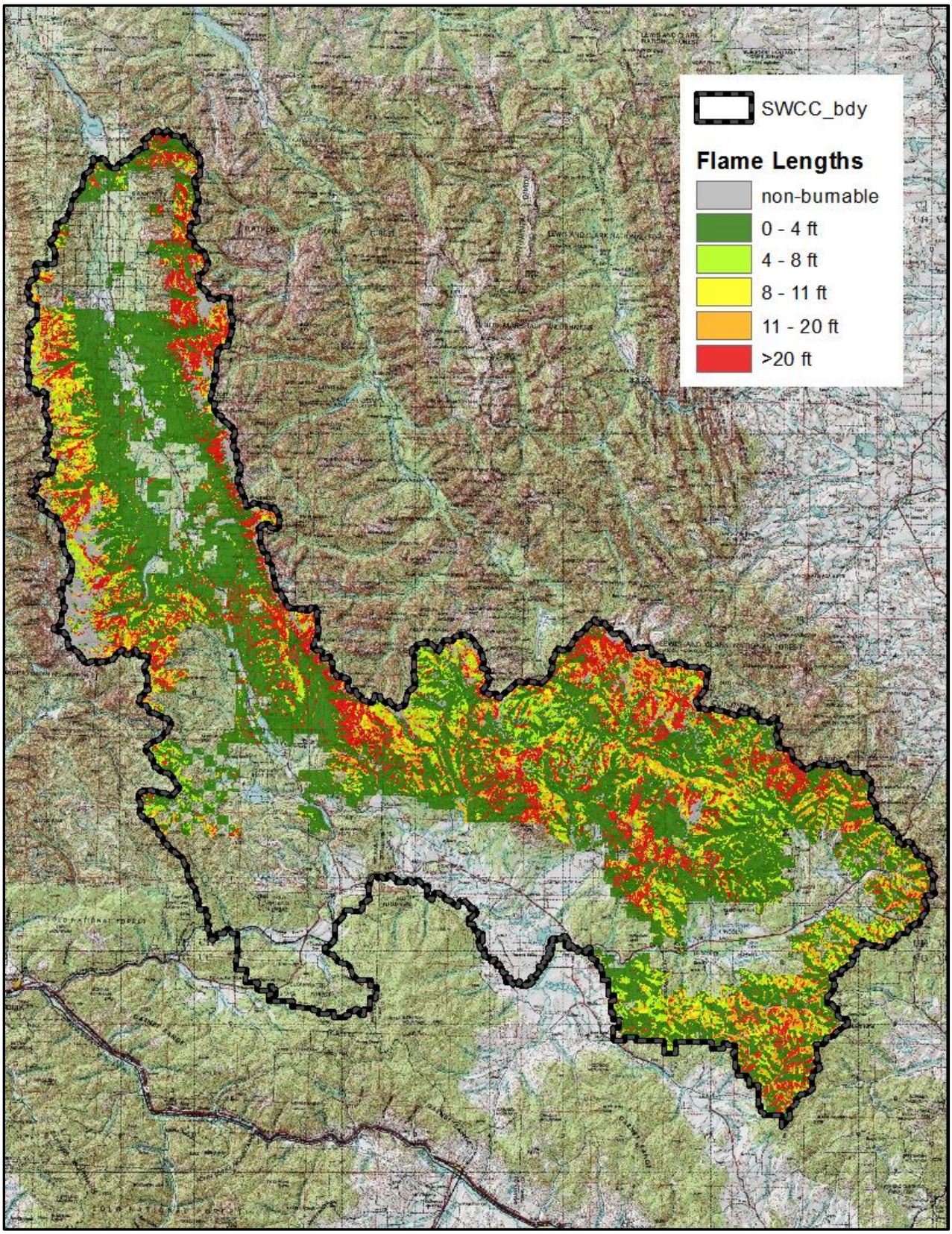

Figure 1. *Predicted flame lengths at the end of FY2014 within the SWCC using 97th percentile weather and fuel moisture conditions*

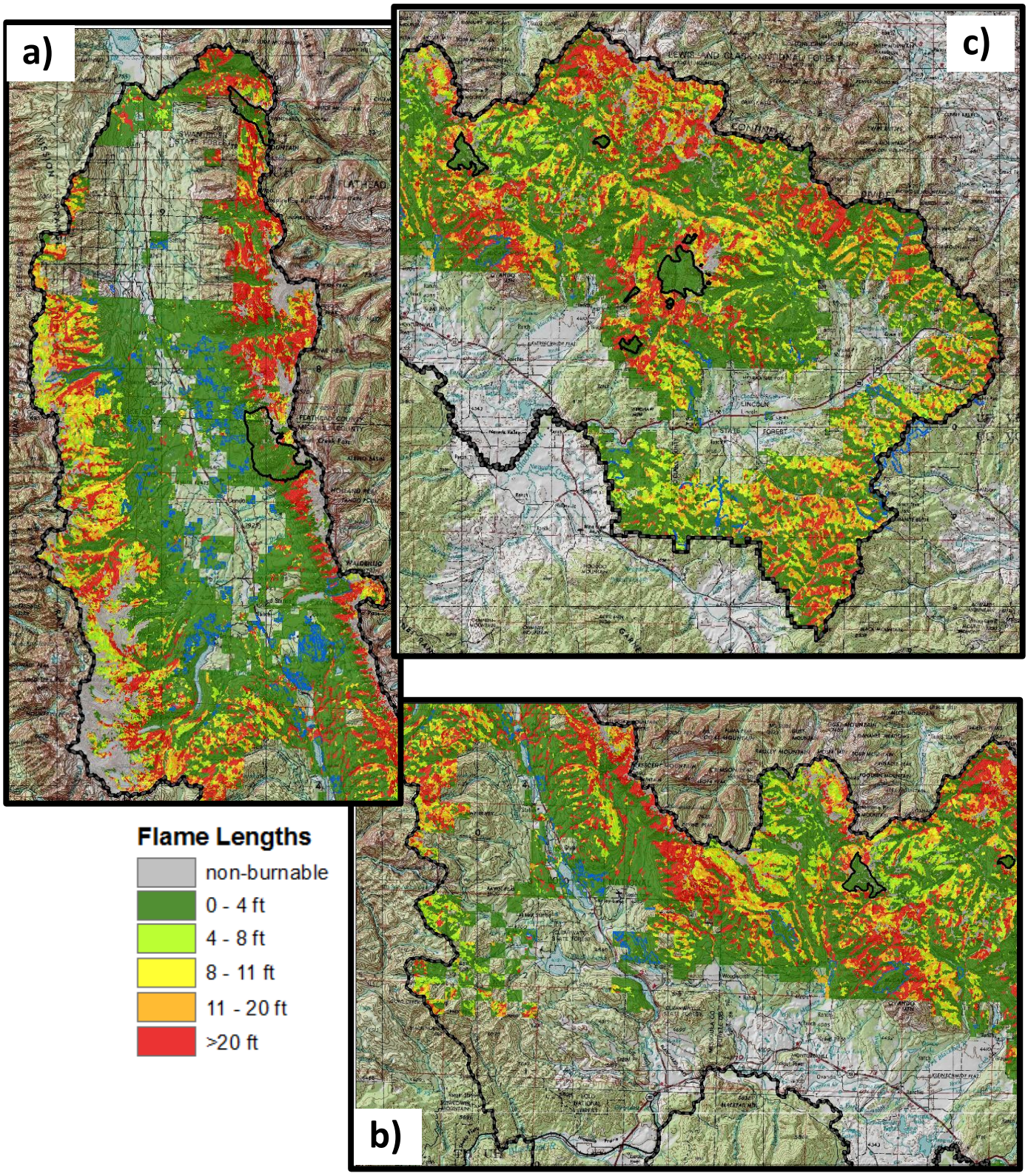

Figure 2. *Predicted flame lengths at the end of FY2014 using 97th percentile weather and fuel moisture conditions for a) Swan Lake RD, b) Seeley Lake RD, and 3) Lincoln RD. Blue polygons denote planned activities while black polygons show locations of wildfires.*

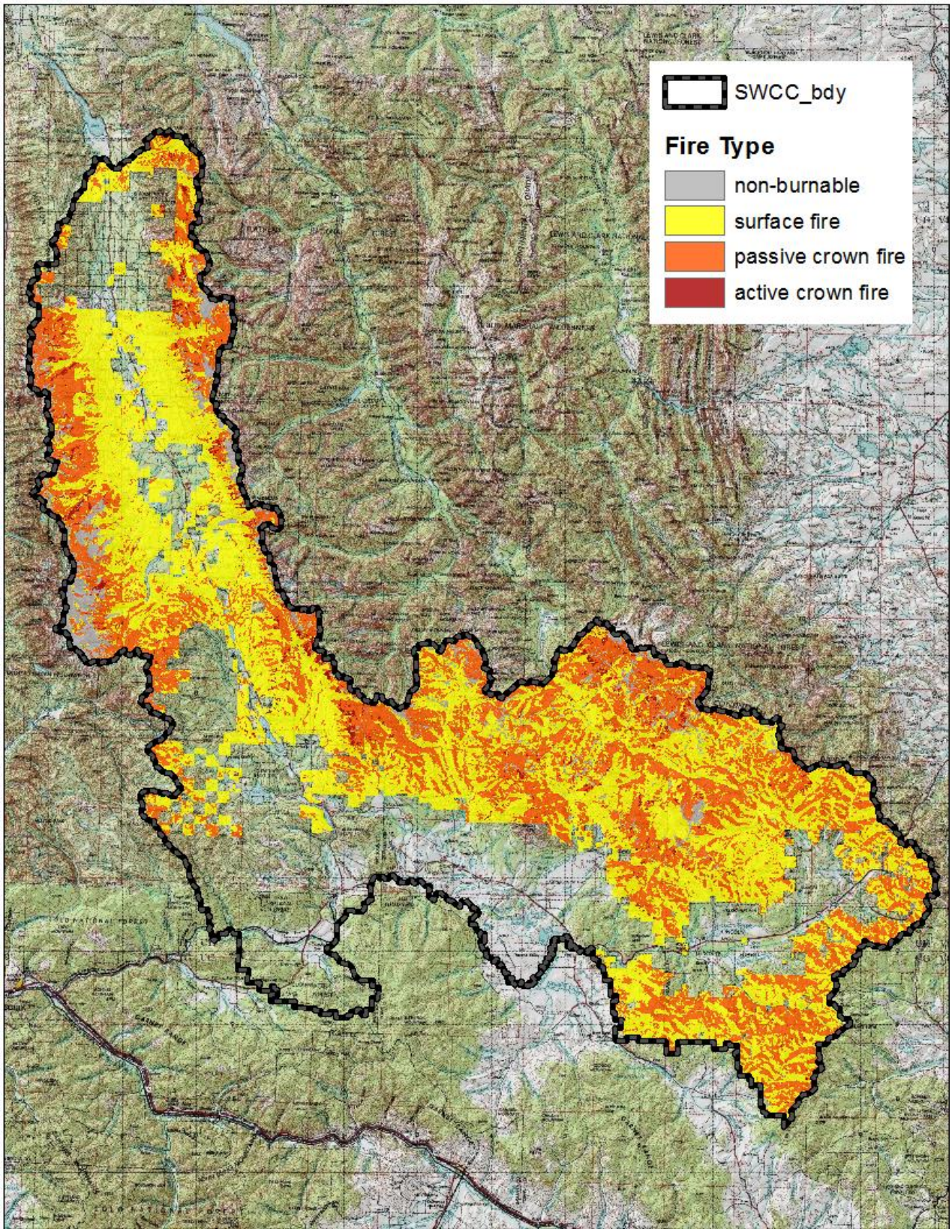

Figure 3. *Predicted crown fire activity at the end of FY2014 within the SWCC using 97th percentile weather and fuel moisture conditions*

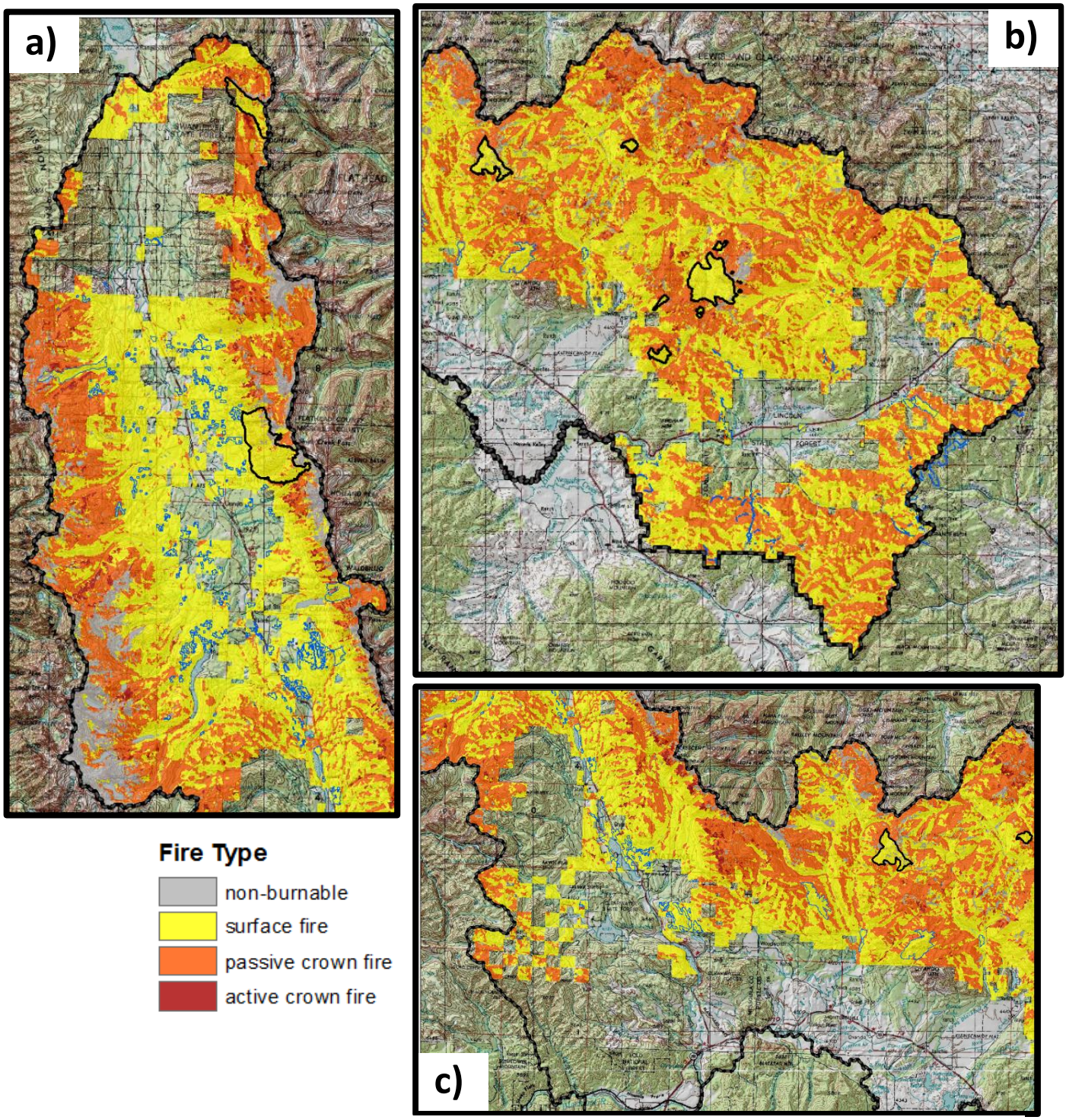

Figure 4. *Predicted crown fire activity at the end of FY2014 using 97th percentile weather and fuel moisture conditions for a) Swan Lake RD, b) Seeley Lake RD, and 3) Lincoln RD. Blue polygons denote planned activities while black polygons show locations of wildfires.*

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