Reconstructing late-1800s landscapes of the Uncompangre 1 Plateau using the General Land Office Surveys 2 3 4 William L. Baker, Emeritus Professor 5 Program in Ecology/Dept. of Geography 6 University of Wyoming, Laramie 7 8 GOAL Use late-1800s land-surveys to provide landscape-scale data to complement stand-level 9 rapid assessments to further inform ecological restoration on the Uncompangre Plateau 10 11 THE GENERAL LAND OFFICE (GLO) SURVEYS 12 Rectangular surveys: townships 6 miles X 6 miles with 36 sections each 1 mile X 1 mile 13 14 15 Data 16 Bearing trees at marked section corners 12" diameter 47 deg. Section-line descriptions of dominant trees & shrubs in order 17 18 of abundance 19 "Timber heavy pine and spruce. Dense undergrowth of oak" 20 21 Can use these data to reconstruct: 22 Tree density 23 Tree basal area 24 Tree species composition 25 Tree diameter distributions Understory composition (dominant shrubs) and relative abundance 26 o Fires: severity, patch size, fire rotation 27 Location of ecotones (e.g., boundary from subalpine forest into grassland openings) 28 29 THE UNCOMPAHGRE GLO PROJECT - 2014 PROGRESS 30 31 2014 startup funding from Colorado Forest Restoration Institute-Thanks to Tony Cheng 32 Collab. with Dan Binkley, Bill Romme-CSU 33 34 35 Study Area Plateau section-Uncompangre NF 36 37 O Mostly surveyed 1883-1902 38 39 Entered data into GIS in Fall 2014 40 About 650,000 acres and 28 townships o 3,507 bearing trees 41 o 4,070 section-line descriptions across 42 43 2,011 miles of section lines 44 Covers 45 Pinyon-juniper woodlands

Ponderosa pine forests

Mixed conifer forests

Spruce-aspen forests

46 47

48

49

Reconstructing late-1800s landscapes of the Uncompangre Plateau using the General Land Office Surveys

William L. Baker, Emeritus Professor Program in Ecology/Dept. of Geography University of Wyoming, Laramie

GOAL

1

2 3 4

5

6

78

9

10 11 12

13 14 15

16

17

18

19

20 21

22

23

24

25

2627

28 29

30

31 32

33 34 35

3637

38

39

40

41

42 43

44

45

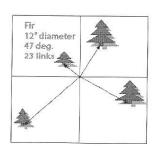
46

47

 Use late-1800s land-surveys to provide landscape-scale data to complement stand-level rapid assessments to further inform ecological restoration on the Uncompangre Plateau

THE GENERAL LAND OFFICE (GLO) SURVEYS

- Rectangular surveys: townships 6 miles X 6 miles with 36 sections each 1 mile X 1 mile
- Data
 - Bearing trees at marked section corners
 - Section-line descriptions of dominant trees & shrubs in order of abundance
 - "Timber heavy pine and spruce. Dense undergrowth of oak"

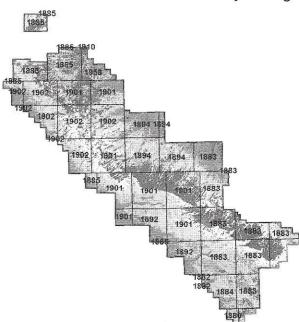


- Can use these data to reconstruct:
 - Tree density
 - Tree basal area
 - Tree species composition
 - Tree diameter distributions
 - Understory composition (dominant shrubs) and relative abundance
 - o Fires: severity, patch size, fire rotation
 - Location of ecotones (e.g., boundary from subalpine forest into grassland openings)

THE UNCOMPAHGRE GLO PROJECT - 2014 PROGRESS

- 2014 startup funding from Colorado Forest Restoration Institute

 —Thanks to Tony Cheng
- Collab. with Dan Binkley, Bill Romme-CSU
- Study Area
 - o Plateau section-Uncompangre NF
 - Mostly surveyed 1883-1902
- Entered data into GIS in Fall 2014
 - About 650,000 acres and 28 townships
 - o 3,507 bearing trees
 - 4,070 section-line descriptions across
 2,011 miles of section lines
 - Covers
 - Pinyon-juniper woodlands
 - Ponderosa pine forests
 - Mixed conifer forests
 - Spruce-aspen forests



48 49