

Mt Haggin

June 2, 1977

Arnold Foss  
Regional Game Manager  
Route 3, Box 274  
Bozeman, Montana 59715

Dear Arnold:

As I indicated during the Butte meeting I plan to return and visit the Mt. Haggin Area in late July or early August after the vegetation is full grown and seed-ripe time approaches and continue to help develop livestock grazing and other plans for the area.

Plant phenology. Information on plant growth and development will be needed to develop and carry out management plans. A scheme for getting such information will be worked out during the year. But we will need some information on some of the more important species in July or August. Can you arrange to have some data collected by that time? Information on the species listed below would be most helpful.

1. Grassland type
  - Danthonia (annual?)
  - Bluebunch wheatgrass
  - Idaho fescue
  - Lupine
  - Balsam root
2. Big sagebrush type
  - ✓ Big sagebrush
  - ✓ Fringe sage
  - ✓ Bluebunch wheatgrass
  - ? Needle grass (Stipa sp)
3. Bitterbrush type
  - Bitterbrush
  - Bluebunch wheatgrass
  - Idaho fescue
  - Balsamroot (?)

2.

4. Willow-riparian type
  - Willow species, No. 1
  - Willow species, No. 2
  - Willow species, No. 3 (?)
  - Alder (?)
  - Other (?)
5. Aspen type
  - Aspen. Established trees
  - Aspen. Sprouts
  - Other (?)
6. Conifer
  - ← Shrubs (game browse)
    - Bitterbrush
    - Big sagebrush
    - Snowberry (*symplocarpos*)
    - Ceanothus velutinus
    - Other (?)
  - Trees (game browse)
    - Species (?)

I have worked out a form for recording the data. Copies are enclosed. I have filled in data for Idaho fescue for the grassland type on one sheet to illustrate the form of entries.

Establish two plots-observation areas--in each vegetation type, one at a low (L) altitude and another at a high (H) one. Mark the location of each plot with a steel fence post driven spade up. Mark the plot number and altitude location L, or H, on the spade. I have numbered the vegetation types 1 to 6 arbitrarily. The low plot in the bitterbrush type therefore would be designated 3L and the high one 3H.

Establish the plots close to roads for easy access. Spot the location of the plots on a contour map.

Observe the plots every 14 days or so. Make the first entries for all species in all types under examination 3.

3.

I prepared a form for recording but two plant growth stages, flowering and seed-ripe. Please get this information for as many showy-flower species on each plot area as there is time for. Hold strongly but not exclusively to perennials. The information will be helpful in forecasting growth stages in species other than the ones observed.

Livestock grazing. Until plans for managing livestock grazing on the area are firmed up, I suggest the cattle be allowed to graze as in the past at the discretion of the livestock operator but with the restrictions on stocking and season of grazing specified in the acquisition agreement. The use pattern will provide important information for planning future management of grazing.

Have the stockman keep a record of when (date), where (location), how (trailed or trucked) the cattle are put on and taken off the area and the numbers and class of stock involved and where the animals are grazed during the summer. Some of this information can probably be put on small maps.

Will see you,

Enclosures (to M. Frisina)

cc: L. Ellig  
M. Frisina -  
J. Egan

ALHORMAY:green

Area: Name MT Haggin State Montana Agency Montana Fish & Game  
Plot: No. 1L Altitude 5660 ft. Aspect SE Location See map

Vegetation Type 1. Grassland

Examination No. Enter 1, 2, etc. : 1 2 3 4 5 6 7 8  
Examination Date : 4/25 5/10 6/1 6/15 7/4 7/15 8/10 8/20  
Observer(s) : MF  
AF

Species Festuca idahoensis

1 Leaves. Start growth (Date <sup>1</sup> )	<u>4/20</u>							
2 " " Length (Inches)	<u>0.5</u>	<u>3.5</u>	<u>5.5</u>	<u>6.5</u>	<u>6.5</u>			
3 Stems, twigs. Start growth (Date)		<u>5/20</u>	<u>5/25</u>					
4 " " " " Length (Inches)			<u>1.0</u>	<u>10.0</u>	<u>25.0</u>	<u>27.0</u>	<u>27.0</u>	
5 Sprouts. Start growth (Date)	<u>Doesn't apply</u>							
6 " " Length (Inches)	<u>" "</u>							
7 Flowering. Peak (Date)					<u>7/18</u>	<u>7/20</u>		
8 Seed ripe. Peak (Date)							<u>8/15</u>	<u>8/15</u>
9 Greenness (Percent)	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>97</u>	<u>90</u>	<u>50</u>	<u>30</u>

Species

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8 Seed ripe. Peak (Date)  
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<sup>1</sup> Estimate probable date of growth stages 1, 3, 7 and 8 at time of examination nearest to date. ✓ The estimate on June 1<sup>st</sup> is the better one

Plant Phenology  
Year \_\_\_\_\_

Area: Name \_\_\_\_\_ State \_\_\_\_\_ Agency \_\_\_\_\_  
Plot: No. \_\_\_\_\_ Altitude \_\_\_\_\_ ft. Aspect \_\_\_\_\_ Location \_\_\_\_\_ See map \_\_\_\_\_

Vegetation Type

Examination No. Enter 1, 2, etc. :

Examination Date :

Observer(s) ) :  
)

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