Water Policy Interim Committee
Subdivision Project Review

Presenter: Ryan Casne, P.E.
Casne & Associates Inc.
Helena, MT

Two (2) Projects in the Helena Valley:

Grass-Land Subdivision (2004-2006)

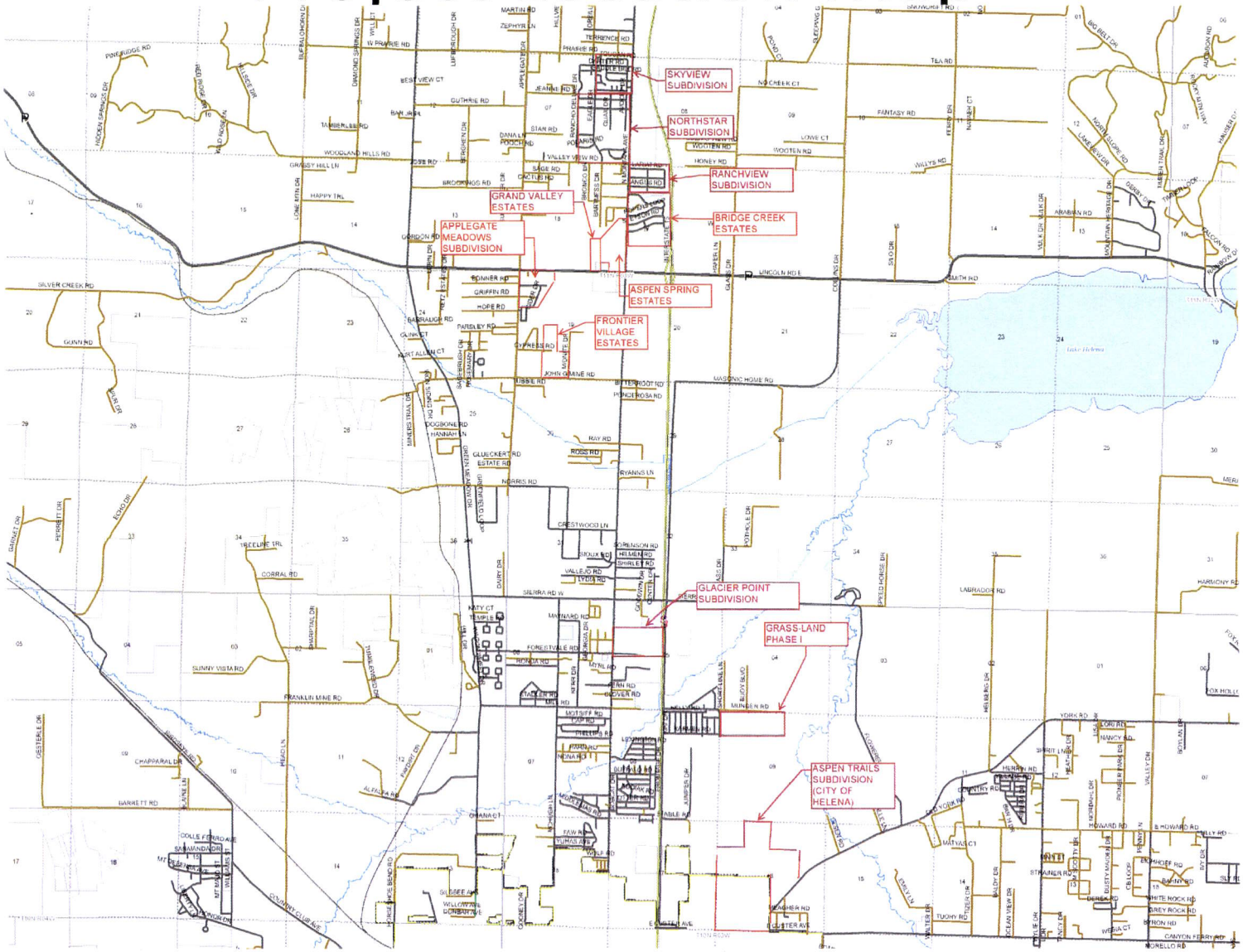
Public Water System with DNRC Beneficial Water Right

TimberWorks Subdivision (2011)

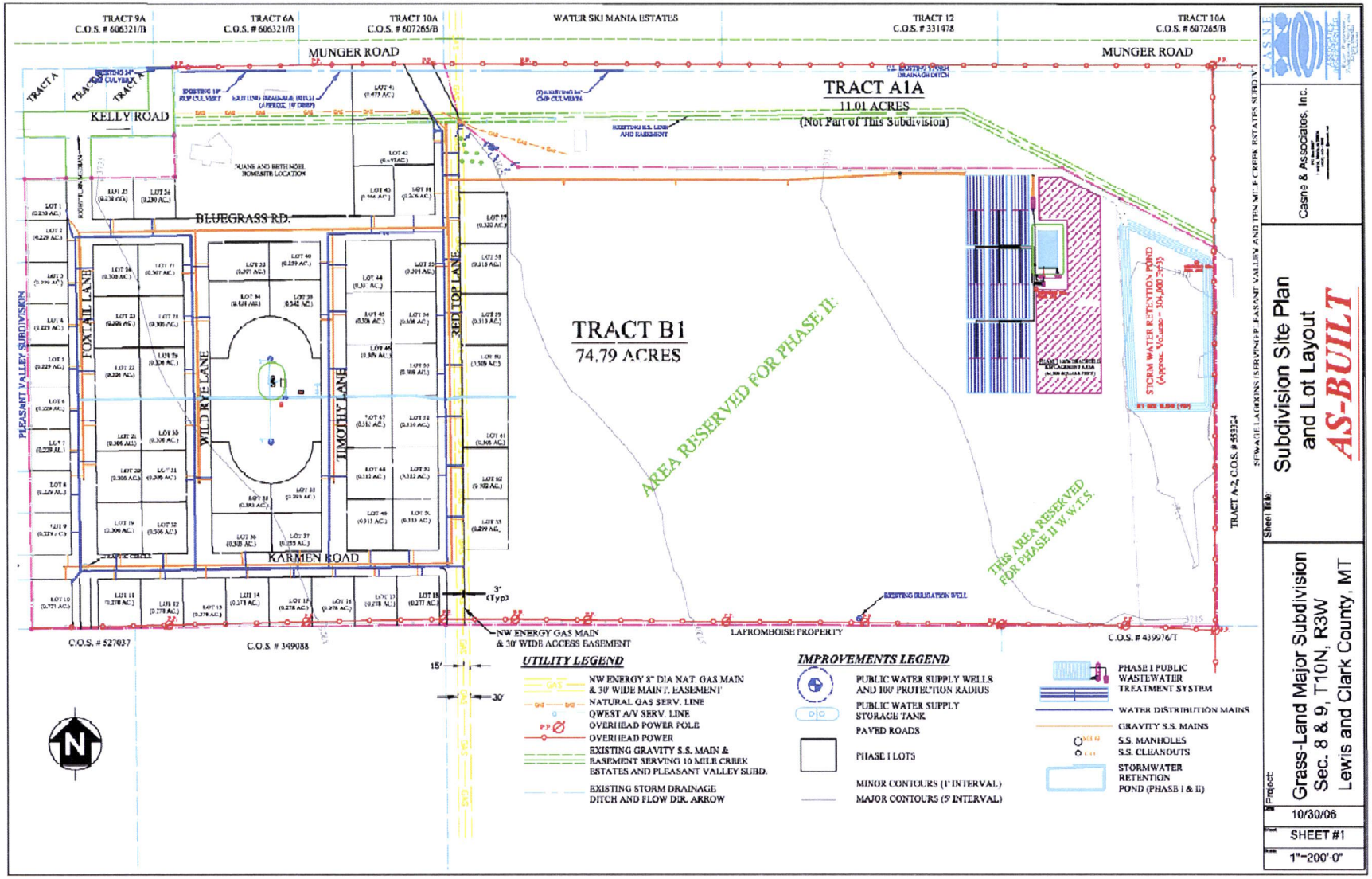
108 Exempt Wells; no DNRC Beneficial Water Right

WPIC
September 13, 2011
Exhibit 9

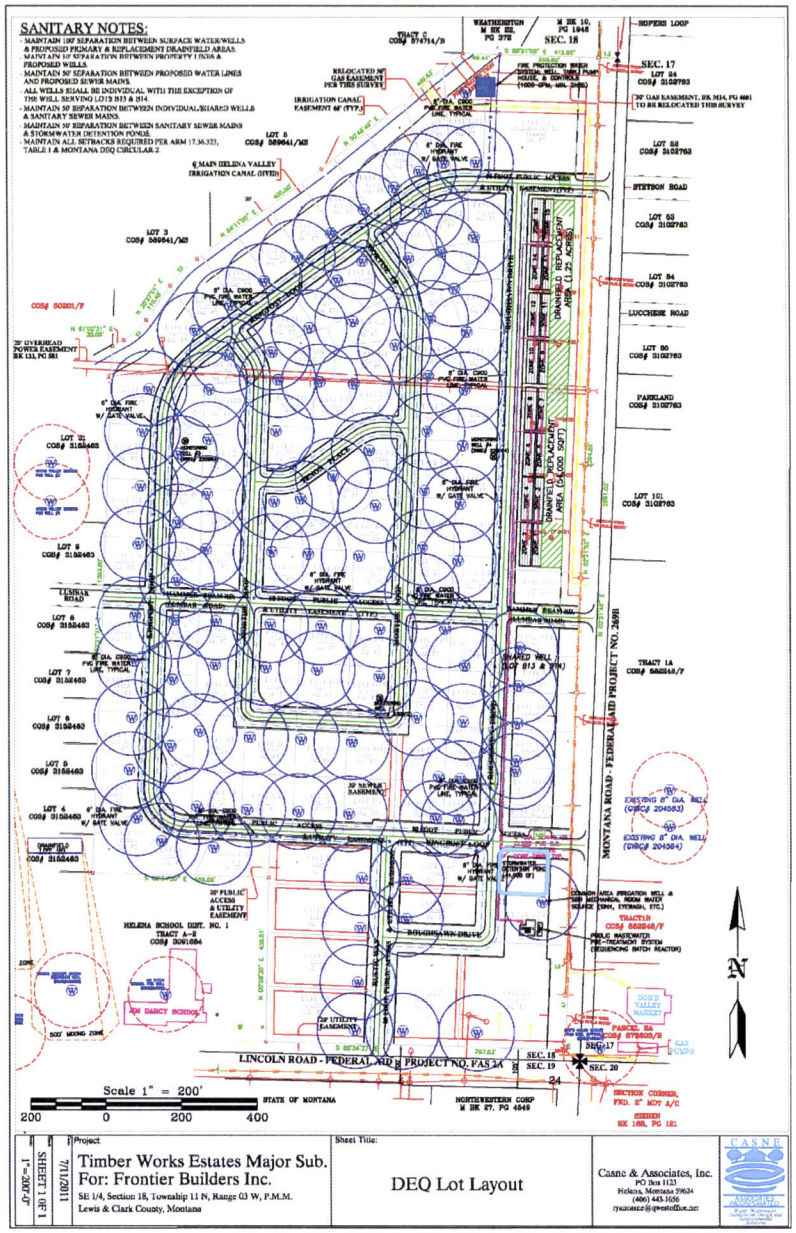
Project Location Map



Grass-Land Subdivision Layout



TimberWorks Subdivision Layout



PROJECT COMPARISON

Timberworks & Grass-Land Subdivisions

	Grass-Land Subdivision	Timberworks Estates (2011)
Date of Preliminary Plat	2004	2011
Total Number of Lots	66 Currently; 18 more with Phase IV	108
Residential Lots	66 Currently; 18 more with Phase IV	83
Commercial Lots	0	22
Common/Utility Lots	2	3
Phases	2 completed	8
Sewer Improvements	Community Wastewater System w/ Gravity Collection System, Level II RSF Treatment, & Pressure-Dosed Drainfields	Community Wastewater System w/ Gravity Collection System, SBR Advanced Treatment, & Pressure-Dosed Drainfields
Domestic Water Improvements	Public Water System w/ Water Mains, Services, two (2) High Production Supply Wells, and fiberglass potable storage tank	Individual Wells on each Lot. Some commercial water supplies will require MDEQ PWS Review if they serve over 25 persons/day > 60 days/year
Fire Protection Improvements	1000 GPM for 2Hrs @ 20 PSI; Water Mains & Hydrants throughout Subdivision; **PWS supplies the fire protection water**	1000 GPM for 2Hrs @ 20 PSI; Water Mains & Hydrants throughout Subdivision; On-Site or Off-Site Source
DNRC Water Right Required?	Yes- Beneficial Water Right **(predated HB831 & issued by the DNRC in approximately 9 months); water right was issued for the final proposed buildout of 137 Lots**	No - Individual Wells are Currently Exempt from DNRC Beneficial Water Right Requirements if they produce < 35GPM with total yearly withdrawal < 10 Acre/Ft

Timberworks Estates **Redesign**

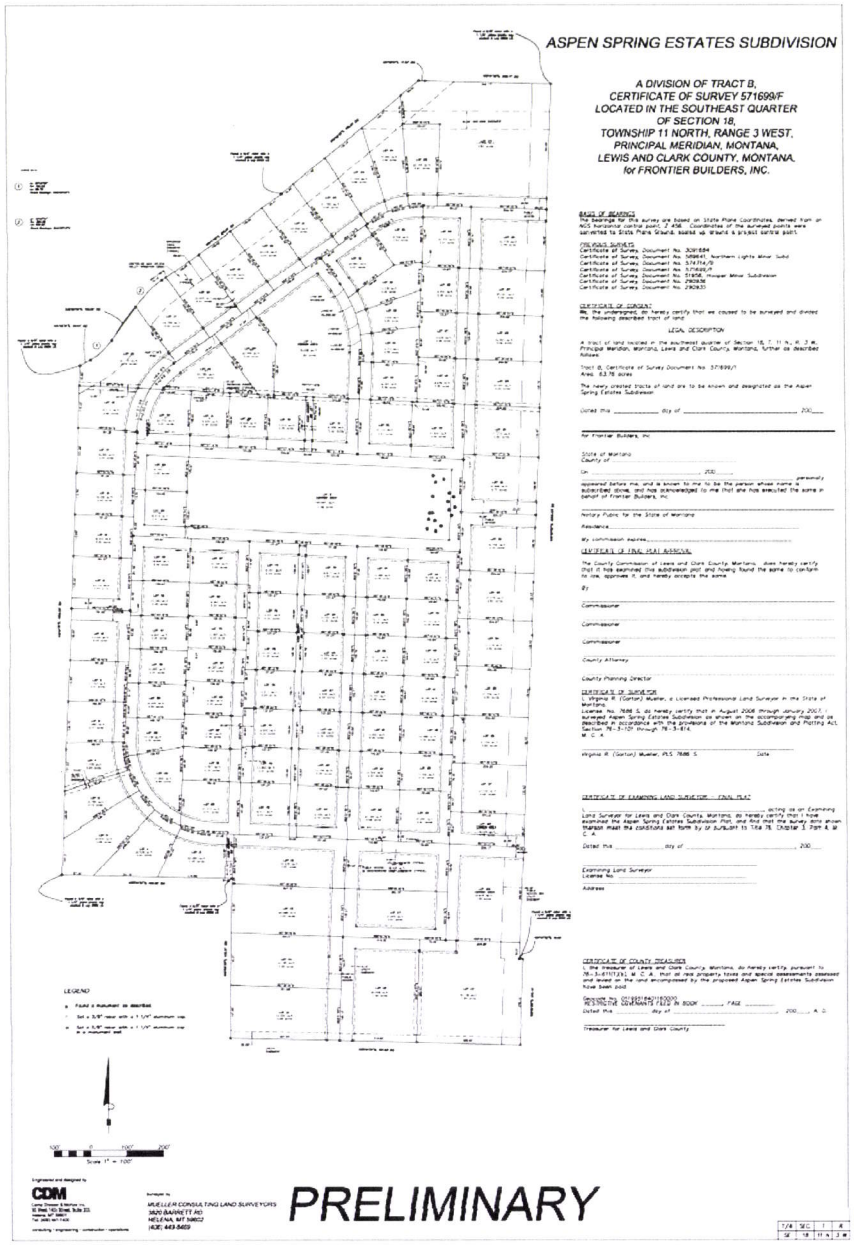
- Timberworks Estates was originally issued a preliminary plat approval in March 2007.
- A redesign was accomplished in 2010. The decision to redesign was due to three (3) major factors:

1) The DNRC Water Rights application process with HB831 mitigation had effectively stalled and the current Lewis & Clark County Commission has repeatedly shown reluctance to issue a final plat approval for any subdivision without a permanent DNRC beneficial water right.

2) Lack of demand for residential lots. Commercial demand still high.

3) Preliminary Plat approval expires after three (3) years; March 2010.

Timberworks Estates – First Proposal 2007 thru 2010



PROJECT COMPARISON

Current & Previous Major Subdivision Proposals

	Aspen Spring Estates (2007/2008)	Timberworks Estates (2011)
Total Number of Lots	111	108
Residential Lots	99	83
Commercial Lots	9	22
Common/Utility Lots	3	3
Phases	1	8
Sewer Improvements	Community Wastewater System w/ Gravity Collection System, SBR Advanced Treatment, & Pressure-Dosed Drainfields	Community Wastewater System w/ Gravity Collection System, SBR Advanced Treatment, & Pressure-Dosed Drainfields
Domestic Water Improvements	Public Water System w/ Water Mains, Services, and Two (2) High Production Supply Wells	Individual Wells on each Lot. Some commercial water supplies will require MDEQ PWS Review if they serve over 25 persons/day > 60 days/year
Stormwater Improvements	Impervious Curb & Gutter w/ Piped Collection System to Central Detention Ponds	Vegetated Borrow Ditches w/ Road Culverts & Central Detention Ponds
Roadway Widths	24' Pavement Width in Commercial & Residential Areas	24' Wide Pavement Width in Residential Areas & 32' Pavement Width in Commercial Areas
Fire Protection Improvements	1000 GPM for 2Hrs @ 20 PSI; Water Mains & Hydrants throughout Subdivision; On-Site or Off-Site Source	1000 GPM for 2Hrs @ 20 PSI; Water Mains & Hydrants throughout Subdivision; On-Site or Off-Site Source
DNRC Water Right Required?	Yes- Beneficial Water Right w/ Mitigation Plan (HB831 Requirements)	No - Individual Wells are Currently Exempt from DNRC Beneficial Water Right Requirements if they produce < 35GPM with total yearly withdrawal < 10 Acre/Ft

PROJECT RE-DESIGN OBJECTIVES:

1) Minimize project unpredictability & risk of litigation

2) Increase flexibility with Phased approach to construction of improvements, platting, & lot sales.

3) Provide more Commercial Lots to better match current market demand

Final Thoughts & Summary

- The decision to design a subdivision using exempt wells rather than a public water system with DNRC Water Rights is <u>not typically financially based</u>. Developers favor PWS's with water rights in *High Density Developments* for two (2) reasons:

  1) Lots with PWS hookups sell for approximately $5,000-$8,000 more than those with exempt wells that are the responsibility of the homeowner.

  2) PWS's in high density developments are almost always used to provide the necessary fire protection water to the developments; typically 1000 GPM for 2Hours at a min 20PSI. Subdivisions with exempt wells require expensive stand-alone fire suppression systems with associated wells, storage tanks, booster pumps, water mains, and fire hydrants.

Final Thoughts & Summary (continued)

- What do Developers want?
  1) Low Costs
  2) Predictable timelines for permitting & construction
  3) Reasonable level of protection from litigation

. Why do they avoid the current DNRC water rights application process?
  1) The process is unpredictable and very slow
  2) Very often the process only yields an interim or temporary water right. Selling lots connected to a PWS without a permanent water right increases a Developer's risk of litigation.

. Suggestion for revision to the current exempt well limits:

15 GPM:	Enough for most well-zoned automatic sprinkler systems.
2 Acre-ft/Yr:	Enough for a lawn of ¼ to ½ Acre or a 2,000 GPD business.