

**REPORT ON APPLICATION FOR PRELIMINARY  
PLAT SUBDIVISION APPROVAL  
EAGLE'S CREST SUBDIVISION PHASES 5-9  
FPP-07-10**

**Submitted to:  
Flathead County Planning Board  
Public Hearing September 5, 2007**

**Prepared for:  
Flathead Lake Protection Association, and  
McGarvey, Heberling, Sullivan & McGarvey, PC**

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**Flathead County Planning Board  
Eagle's Crest Subdivision Phases 5-9  
FPP-07-10**

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Submitted to:

Flathead Lake Protection Association  
McGarvey, Heberling, Sullivan, & McGarvey, PC

Prepared by:

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## **1. Introduction**

The report is prepared on behalf of the "Flathead Lake Protection Association" (FLPA) regarding a preliminary plat application for Eagle's Crest Subdivision Phases 5 – 9. The application was originally considered by the Flathead County Planning board on May 16, 2007. Subsequently, the Flathead County Board of Commissioners remanded the application to the planning Board for further review. This report is based on original application material, staff reports, supplementary material submitted to the Planning Department by the applicant and publicly available information.

The purpose of this report is to discuss land use and planning issues related to the proposed application in regards to:

- Compliance with regulations and consistency with county planning documents
- Compliance with MCA requirements
- Sewage, water, wildlife, wildfire, transportation and environmental impacts
- Deficiencies in background studies, data and analysis necessary to make an informed decision.

As discussed in this report, it is the position of the FLPA that the proposal does not meet the Flathead County Subdivision Regulations (in effect at the time of application) or the Statutory (MCA: 76-3-101, et al) requirements for granting preliminary plat approval. There are a number of instances where critical information and/or analysis have not been submitted. Moreover, given the site features with regards to slope, soils, urban-wildfire interface, and wildlife habitat the design of the subdivision is too dense and, if approved, will create significant health and safety concerns. These problems cannot be adequately mitigated. Redesign of the subdivision is the only way to address these issues.

**Due to these concerns, it is the position of "Flathead Lake Protection Association" that this application should be denied.**

## 2. Project Overview

### a. Site Features

Throughout the applicant's Environmental Assessment (EA) calculations for water, sewer, storm-water run-off and traffic impacts are based on the total unit count of 825 units. As indicated by the following analysis, with the addition of condominiums on the "mixed-use – village urban" lots, actual number of dwelling units could potentially add up to 1000 units. Additionally, the calculations do not account for the additional impervious surface, water usage, sewer demands, or traffic that would be generated from the development of commercial uses on the mixed use lots or the guest houses that may be built, or the rental guest cabins that would be allowed in the common areas. Furthermore, average lot size is calculated at 1.05 per acre but in actuality, 69% are smaller than one acre and at least 240 lots are smaller than 1/2 acre.

**Total Site Acreage - 1,353**

**Total Acreage in Lots - 777**

**Common Area Acreage – 576** (Includes golf course and open space. A typical 18 hole golf course occupies 150 to 200 acres of total land according to the Golf Course Superintendent Association.)

**# of Single Family Lots – 670**

**# of Condominium Lots – 86**

**# of Mixed Lots - 69** (The EA describes these lots as follows, "The project includes 69 lots designated as village urban or mixed use, which can be developed with residences and/or neighborhood commercial services.)

**# of Dwelling Units – 756 DU up to 1000 DU.** If the mixed use lots are developed as commercial, then the total DU = 670 lots + 86 condominiums. If the mixed use lots are developed as condominiums, with an average of 4 units per lot, this could potentially add 280 more units. For purposes of this analysis the total has been rounded to 1000 DU's.

**Density -** Density is usually based on number of dwelling units. This results in a gross density for the project of one unit per 1.79 acres per unit to 1.35 acres per unit.

### **Lot Sizes**

- < 0.5 acres                      33%
- 0.5 to 1.0 acres                36%
- 1.0 to 2.0 acres                21%
- 2.0 + acres                        10%

**Additional Development** – The CC&Rs also allow the following development:

- 4.2 – Auxiliary residential structures
- 4.3 – Guesthouse for each residential lot is permitted
- 5.2 - The following may be build in the common area: Club House, Recreation Center, Aircraft Landing Strip, Golf Practice Area, Firearm Discharge Area, RV Parking Area, Guest Cabins, Aircraft Hangars,

## **b. Chronology**

As demonstrated in the following timeline, there have been multiple hearing dates and multiple submittals by the applicant. This creates due process issue and public participation issues. The dates and procedure in the MCA is intended to allow the public and staff to have adequate time to review technical information. When multiple submittals by the applicant are allowed, there is insufficient time to review the information and respond accordingly. On June 28<sup>th</sup>, the petitioner agreed to submit all new material by July 13<sup>th</sup>. Yet, the petitioner has continued to submit material beyond that date resulting in further continuances. Moreover, the numerous submissions have not been consolidated into an Environmental Assessment that is compliant with the Subdivision Act (MCA – 76-3-603(1)(a)) or the Flathead County Subdivision Regulations (FCSR, Appendix B, pg. 1)

### Project Timeline

- 2/12/07 - Submittal by Applicant
- 3/13/07 - Staff issues Letter of Sufficiency
- 4/24/07 - Lakeside Land Use Advisory Committee reviews Eagles Crest Subdivision Phases 5-9
- May - Staff Report on Eagle's Crest
- 5/14/07 - Memo #1 from Land Solutions to Flathead County Office of Planning & Zoning regarding staff report findings
- 5/16/07 - Flathead County Planning Board Review of Eagle's Crest
- 6/5/07 - Flathead County Board of Commission reviews Eagle's Crest Subdivision - Item Continued until 6/28/07
- 6/28/07 - Flathead County Board of Commissioners remands back to Planning Commission for 8/15/ hearing. Applicant agrees to have all new material submitted on 7/13/07
- 7/13/07 - Applicant submits additional material

- 7/30/07 - Staff Report #2 reflecting new material
- 8/10/07 - Applicant submits additional material
- 8/15/07 - Public Hearing Rescheduled until 9/05/07
- 8/15/07 - Supplemental Memo from Morrison Maierle, Inc. (Craig Schaeffer, P.E.)
- 8/15/07 - Supplemental Memo from Land Solutions (Jayme Wolfe)
- 8/21/07 - Revised Staff Report #3 to reflect supplemental material

### **c. Legal Requirements for Review**

In addition to basic due process questions with the procedure, there are also concerns about the completeness of the application. As noted throughout this report, there a number of instances where there is insufficient information to fully evaluate the impacts of the subdivision. In *Neighbors Over the Aquifer (NOTA) v. Board of County Commissioners of Flathead County*, Cause No. DV-05-179(B), Judge Curtis granted summary judgment to the plaintiffs and invalidated the subdivision at issue on the basis that the applicant failed to submit all of the information required in its application and Environmental Assessment. Following is an excerpt from that judgement

“There are a myriad of reasons why the legislature has required the applicant to provide the information prescribed for the EA; one being that this is a burden that cannot and should not be placed upon the public who are, predominantly, simply interested citizens without the resources or technical expertise of a developer. To simply say that the Board received some of the omitted information, even if from a different source, so "no harm, no foul," is not persuasive. One can imagine that if interested citizens provided to the Board, and the Board acted upon, information about a subdivision not contained in an EA, and the information turned out to be inaccurate, the developer would not hesitate to fault the Board and demand that the information be disregarded. The bottom line is that the responsibility for submitting a complete EA falls on the developer and, in the instant case, the Board approved a subdivision based upon an incomplete EA.”

(*NOTA* Order of 07/28/06 at p. 9)

In reaching this conclusion, Judge Curtis reviewed the provisions of § 76-3-603(1)(a), MCA, which provide “the environmental assessment must accompany the subdivision application. . .”

The regulations adopted under § 76-3-501 and the regulations adopted under the subdivision Act include the following include the following provision. (Hereafter, italicized print and indents signify a statute or regulation):

*This Environmental Assessment format shall be used by the applicant as a guide, in compiling a thorough description of the potential impacts for the proposed subdivision. Each question pertinent to this proposal must be addressed in full (both maps and text); those questions not applicable shall be so stated. Incomplete Environment Assessments will not be accepted.*

(FCSR, Appendix B, at p. 80; emphasis added.)

### 3. Geology

- Natural Resource Conservation Service (NRCS) rates the soils as “very limited” for roads, dwelling, lawns, golf courses and commercial buildings.
- The proposal does not comply with Master Plan Policies for building roads or building residential structures on soils with limitations.
- Much of the site has slopes exceeding 30% and is unsuitable for building.

#### a. 1987 Master Plan Policies on Soil Limitations for Roads

The Flathead County Subdivision Regulations require that the Planning board and County Commission review the application for conformance with the “applicable” master plan. As noted in the record, the 1987 Master Plan applies to this project.

*Policy 4.12 Soil Limitations affect road construction. Areas which exhibit four or more of the following limitations should not be developed into roads.*

- a. Less than 20 inches to the water table;*
- b. Five year flood hazard;*
- c. Poor load bearing capacity;*
- d. High frost heave potential;*
- e. Stony land;*
- f. Less than 20 inches to bedrock and,*
- g. Plus Slope*

#### Analysis

The NRCS rating for the site is “Very Limited” for a substantial majority of the site due to slope, depth to bedrock and frost action. (See Figure 1) Following is a description of this rating. The complete soil tables are included in the appendix

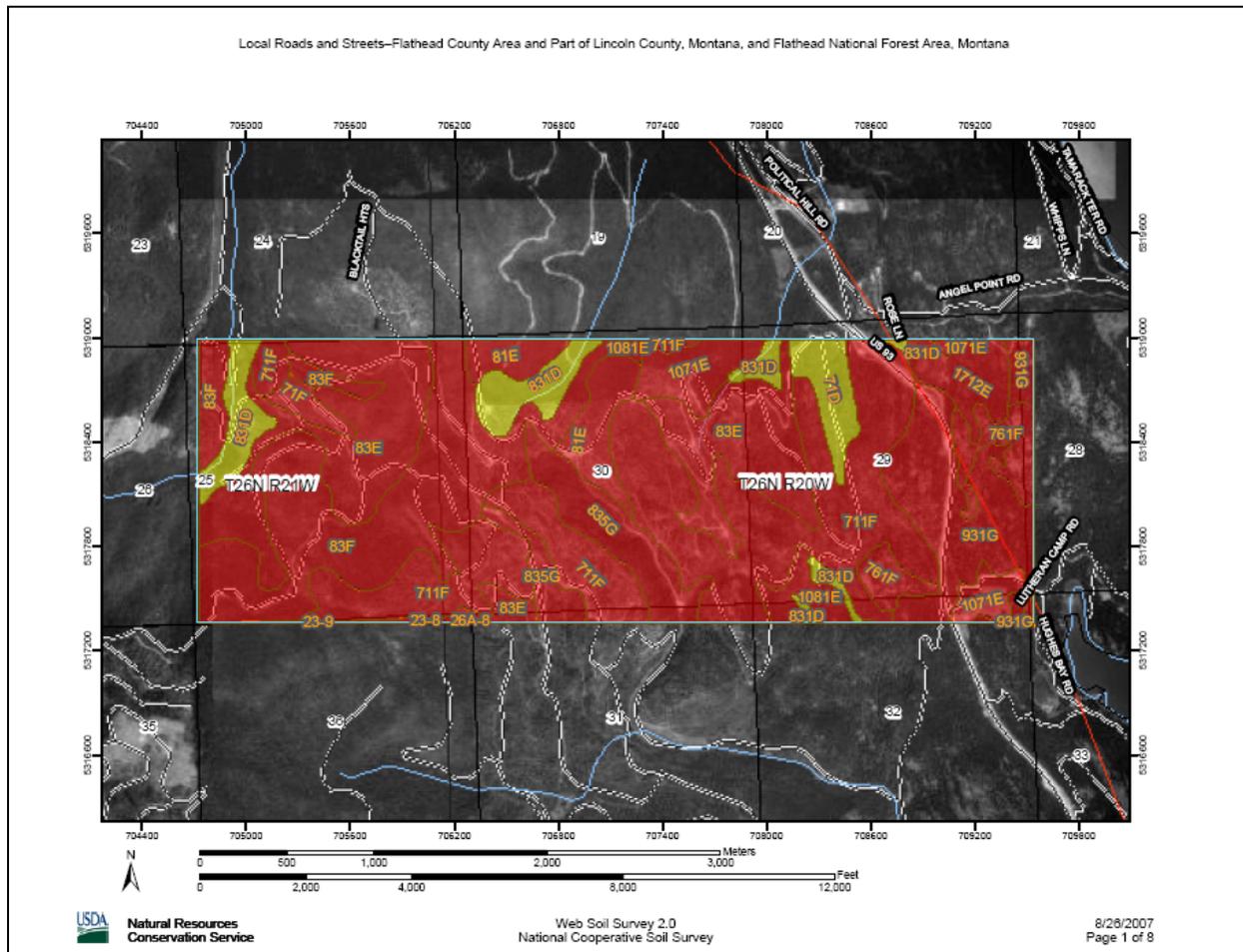
(Attachment A). It should be noted that a large portion of the soils on site have the **most negative** rating of 1.0 for slope and 1.0 for depth to bedrock on a scale of .00 to 1.0.

“The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected. Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).”

(Source: Natural Resource Conservation Service)

Figure 1: NRSC Soil Map



*Note: This map is identical for “Dwellings with basements”, “Dwelling without basements”, “Lawns, landscaping and golf courses”. The map for “Commercial Structures is rated entirely “very limited”.*

In respect to criteria (d) and (g) in Policy 4.12, the soil report for the site indicates that the site has limitations due to slope and frost action. In respect to criteria (f), although no sub-surface analysis has been completed to determine depth to bedrock, the memo from Morrison Maierle dated 8/15/07, notes, “...general depth to groundwater is discussed in the receding material, however, depth to bedrock or impervious material on the site may be minimal.” Additionally, The NRCS soil reports indicate that several soil types on site have a low depth to bedrock.

In respect to criteria (e) both the applicant’s EA and the supplementary memo of 8/15/07 mention rock outcroppings on the site. This would indicate a stony terrain but

lack of a geotechnical analysis does not provide enough information on the pervasiveness of this characteristic.

This analysis suggest that criteria (d), (e), (f) and (g) listed in Policy 4.12 are present on the site and provide limitations for developing roads which states that, “Soils which exhibits four or more of the following limitations should not be developed into roads.”

**Note:** The applicant submitted soil survey tables as an attachment to a memo from Morrison – Maierle, Inc. dated 8/15/07. The tables are for soil types from a site in **Lake County**. Attachment A of this memo includes soil tables from the NRCS survey specific to the subject parcel in Flathead County.

#### **b. 1987 Master Plan Policies on Soil Limitations for Residential**

*Policy: 4.13 Soil Limitations affect residential construction. Residential development areas which exhibit four or more severe limitations should be discouraged. Limiting factors include*

- a. High shrink swell behavior*
- b. Less than 36 inches to the water table*
- c. 100 year floodplain*
- d. More than 15% slope*
- e. Less than 36 inches to bedrock*
- f. Extremely stony*
- g. Strong salinity - alkalinity*

#### **Analysis**

The NRCS rating for the site is “Very Limited” for a substantial majority of the site due to slope, depth to bedrock, shrink swell and frost action. (See Figure 1) Following is a description of this rating. The complete soil tables are included in the appendix (See Attachment A). It should be noted that a large portion of the soils on site have the **most negative** rating of 1.0 for slope and 1.0 for depth to bedrock.

“Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

In respect to the criteria in Policy 4.13, according to the NRCS soil report, many of the soils on the site have shrink-swell characteristics that negatively impact residential construction and meet criteria (a). In respect to criteria (d) large portions of the site have slopes over 15%. In respect to criteria (e), no sub-surface analysis has been completed to determine depth to bedrock. As noted in the memo from Morrison Maierle dated 8/15/07, however, the following is noted on pg. 2, “...general depth to groundwater is discussed in the receding material, however, depth to bedrock or impervious material on the site may be minimal.” This statement suggests that depth to bedrock may be less than 20 inches. Additionally, the NRCS soil reports indicate that several soil types on site have a low depth to bedrock.

In respect to criteria (f) both the applicant’s EA and the supplementary memo of 8/15/07 mention rock outcroppings on the site. This would indicate a stony terrain but lack of a geotechnical analysis does not provide enough information on the pervasiveness of this characteristic.

This analysis suggests that four of the features listed in Policy 4.13 are present on the site and residential construction should be discouraged or have a limited density to lessen soil disturbance.

### **c. Flathead County Subdivision Regulations - Suitability of Site**

#### ***Section 3.3 Lands Unsuitable for Subdivision***

*Lands on which there is evidence of hazards such as flooding, snow avalanches, rock falls, land slides, steep slopes in excess of 30% or more grade, subsidence, high hazard fire areas, high water table, polluted or non-potable water supply, high voltage lines, high pressure gas lines, air or vehicular traffic hazards or congestion, or other features which may be detrimental to the health, safety or general welfare of existing or future residents, or where development would place unreasonable burdens*

*on the general public including the requirements of excessive expenditure of public funds or environmental degradation shall not be subdivided for building or residential purposes unless the hazards are eliminated or will be overcome by approved design and construction plans. (Emphasis Added)*

### **Analysis**

Major portions of the site have slopes that exceed 30% grade. This is noted throughout the petitioner's application, the staff report and comments from various agencies. Attachment B is a map of slopes illustrating the steep terrain. Although, the Environmental Assessment submitted by the applicant notes that a geotechnical engineer conducted a site reconnaissance, no written geotechnical report was submitted with the application. The geotechnical engineer recommended "sound and common sense building practices", but without a sub-surface investigation it is not clear what specific building practices should be incorporated into the design.

Although the terrain may be currently stable, conditions may change due to road cuts, grading, and excavation for foundations. There are numerous examples in other parts of the country where construction activities on steep slopes have created conditions conducive to land slides. The degree of risk can only be determined by a genuine geotechnical analysis which would include a thorough sub-surface investigation. This would result in a written report that can be reviewed by planning staff and the public.

### **d. Flathead County Subdivision Regulations Regarding Specific Standards for Slopes**

#### ***Section 3.6 (E) – Building site requirements***

*Each lot shall have a building site (minimum 40 foot by 40 foot square pad) on existing undisturbed terrain of 30% or less slope and each building site must be able to be accessed by a minimum 12 foot wide drive with a maximum 10% slope. Where such a building site is not obvious, for example, when the average slope of a lot exceeds 15%, minimum two foot ground contour intervals shall be shown on the preliminary plat for the building pad and drive way and a statement shall be placed on the final plat noting the specific lots as enumerated may be subject to steep terrain and that the driveway shall be approved by the local Fire Marshal or Fire Chief as suitable access prior to the start of combustible construction.*

#### **3.21 High Fire Hazard Areas – Special Standards:**

*C. Building sites shall be prohibited on any slope that exceeds 30% when located in areas where the general slope characteristic exceeds 30% and at the apex of "fire chimneys" (topographic features, usually drainage ways or swales, which tend to funnel or otherwise concentrate fire toward the top of steep slopes).*

***Appendix A – I.(D) & Appendix I. (L)***

*For each lot where the obvious buildable area is in question (general topography of the lot or immediate topography adjacent to the primary access road exceeds 30 %) show:*

*a. A typical building pad (measuring a minimum 40 foot square) on undisturbed soil of 30% or less slope.*

*b. The building pad must be able to be accessed by a minimum 10 foot wide private drive with a maximum developed grade of 10%. Note that the initial 20 feet of driveway surface shall not exceed 5% slope.*

*c. The driveway and building pad shall be identified on the preliminary plat using minimum 2 foot contour intervals for clarity.*

*d. Any building pad which exceeds 25% in cross slope shall be required to receive a favorable report and comply with the recommendations of a geo-technical soils analysis conducted by a licensed engineer prior to final plat approval.*

*e. Any lot failing to comply with standards a - c is considered unbuildable*

**Analysis**

The staff report notes that 59 lots do not comply with these provisions. The applicant provided a slope analysis for each of these lots. On behalf of FLPA, Mr. Robert S. Rosso, PE conducted the following review of the slope analysis.

“The topography of the Eagle’s Crest Subdivisions is quite steep over a large percentage of the acreage. Several of the lots shown on the plan are on this steep terrain and are steeper than the Black Diamond ski runs at the Blacktail Mountain Ski Area. Although slopes over the required 40 ft. square building site are labeled at less than 30% many are so close to 30% that the accuracy of the slope measurement must be questioned. By considering the accuracy and precision of the field topography measurements, the transfer of those measurements to a map and the process of measuring the dimensions from the map the overall accuracy of the slope dimension can be determined. Although a tolerance for slope is not mentioned in the documents there are several lots with building sites having a listed slope between 29% and 30%. For these lots to be platted with a verifiable building site slope of less than 30% the accuracy of the slope measurement should be listed and each lot must have a building site with a slope less than 30% minus the tolerance.”

Additionally, driveways were indicated on the slope analysis but no mention is made in the staff report if the driveways meet the slope requirements of Appendix A. There was no review of the driveways for these lots by the Somer’s Fire Dept. to determine if they are accessible to emergency vehicles.

#### 4. Surface Water

- There is significant risk that Flathead Lake will be impacted from non-point pollution due to stormwater run-off from the proposed development.

##### a. MCA – Contents of an Environmental Assessment & 1997 Master Plan

###### MCA Section 76-3-603 (1)(a) requires:

*A description of every body or stream of surface water that may be affected by the proposed subdivision, together with available ground water information, and a description of the topography, vegetation, and wildlife use within the area of the proposed subdivision; (emphasis added)*

###### Master Plan Policies

- 2.12 Establishment of limitations on the amount of lot coverage with impervious materials (roofs, asphalt, concrete, etc.) should be considered to limit surface runoff, erosion, and to avoid excessively increasing the density of development.*
- 3.1 Conserve and protect natural lakes, rivers and streams because of their high scenic and resource values.*
- 3.5 Waterfront development should not directly or indirectly cause increased sedimentation or discharge of nutrients into the river or lake either during or after construction.*

###### Analysis

The applicant's EA does mention the presence of Tackling Creek on site and has complied with recommendations from Montana FWP regarding setbacks to the site. The MCA, however, requires that the EA include a description of **all** surface water that may be affected by the proposed subdivision. Due to the proximity of the site to Flathead Lake, impacts on the Lake should also be assessed as part of the subdivision. Attachment C is a map of the Flathead Lake Watershed and clearly indicates this property to be within the watershed that impacts the Lake.

The supplementary memo from the applicant dated 8/15/07 concludes that, "Due to the extremely limited hydraulic connection between the lake and the bedrock source aquifer, Flathead Lake is unlikely to be affected by the proposed subdivision." While Flathead Lake may not be affected by contamination of the bedrock aquifer, it may be significantly impacted by surface water run-off.

The Flathead County Subdivision Regulations (Section 3.12 (B)), requires that storm water detention be designed in a manner that there is no net increase in surface water runoff from the site. The regulations, however, do not eliminate run-off, they only limit run-off to existing levels. While the existing level of run-off to Flathead Lake is from forested land, once development occurs, run-off will be from construction activities and developed land, with significant increases to impervious surfaces. Attachment D, includes excerpts from the Montana Department of Environmental Quality (DEQ), “Montana Nonpoint Source Management Plan – 2007.” The Plan describes the potential impacts on water quality from urban and suburban sources. The plan also includes recommendations for subdivision design to minimize these impacts. (Section “ 4.3.7.2 Diffuse Urban and Suburban Pollution Control Measures”)

The applicant’s EA and the Storm Water Detention Plan do not consider these impacts. The DEQ plan identifies principles that should be incorporated into the proposed subdivision. The importance of incorporating these design measures are noted in the following excerpts from letters submitted to the County regarding the Landmark Condominium Subdivision Proposal:

“Flathead Lake remains vulnerable to the cumulative impacts from these types of non-point source nutrient loading from the creation of impervious surfaces. The growth of algae in Flathead Lake is stimulated by both nitrogen and phosphorus. Every effort must be made to prevent increased N and P from entering the lake via surface runoff or groundwater inputs. As for impervious surface area, the greater the percentage of land covered with impervious surfaces (compacted soils, driveways, house, decking, sheds, etc.), the greater the nutrient load from the property. Impervious surfaces replace vegetation that would have normally removed nutrients in incoming precipitation.”

*Source: Mark Lorang Letter from Flathead Lake Biological Station, regarding Landmark Condominiums Subdivision Proposal (6/15/2006)*

“Pollution is our leading threat to water quality. It comes from contaminants washed off the land’s surface by stormwater runoff and carried either directly or indirectly into waterways or groundwater. Runoff contains phosphorus and nitrogen as well as other pollutants. When the land is covered with shrubs and trees, these plants take up and use the nutrients and can filter out other pollutants, keeping them from reaching the groundwater, streams, and Flathead Lake.

As the amount of impervious surface, such as roofs, parking areas, roads and driveways increases, the velocity and volume of surface runoff increases. Research shows a strong correlation between the amount of impervious coverage and water quality, with water quality declining with an increase in impervious coverage.”

*Source: Letter from Robin Steinkraus, Exec. Director of Flathead Lakers, regarding the Landmark Condominiums Subdivision Proposal(6/19/06)*

## 5. Wildlife

- *In terms of lot design, the Flathead County Subdivision Regulations require that the design conform to the Master Plan (FCSR 3.6)*
- *The proposal does not comply with Section 4.7 of the Master Plan for development of non-riparian big game winter range.*
- *The proposal does not comply with Section 3.2 of the Subdivision Regulations requiring wildlife habitat be protected to the **extent possible**.*

### a. 1987 Master Plan Policies regarding Wildlife

*4.6 Development within Big Game Winter Range Riparian Areas should be discouraged*

*4.7 Development of all non-riparian, big-game **winter range** should not exceed a maximum density of **one unit per 20 acres***

*4.8 Development of impacts on wildlife should be considered and mitigated whenever development will affect riparian complexes, forested areas of over five acres, and marsh areas with or without trees.*

### Analysis

Attachment E from Montana Fish, Wildlife, and Parks indicate that substantial portions of the site are identified as elk, mule deer, and white tail deer winter range. This following excerpt from FWP explains why this winter range is critical.

“Winter range is the most limiting habitat type for ungulates and serve the winter needs for animals migrating from hundreds of square miles of higher elevation “summer “ ranges as well as providing for the year long habitat needs of a lower density of resident animals. The impact of any single subdivision proposal is typically small due to the previously mentioned fact that winter range habitat is widespread. However, the effects of subdivisions over time (cumulative effects) can be large if this habitat type is not incorporated into land use planning. In short, winter range in poor quality or greatly reduced in availability will result in significantly lower ungulate populations. Currently, in excess of \$30 million is spent annually in Flathead Lake, Lincoln and Sanders Counties in hunting-related expenditures. ... It is readily apparent that wildlife resources of the county have significant value in the area’s economy.”

As the 8/21/07 staff report point out on pg. 26,

“Eagle’s Crest Phases 5-9 will not comply with policies 4.6 through 4.8 of the Flathead County 1987 Master Plan because the subdivision proposes an average density of 1.83 acres per lot in an area identified by MT Fish, Wildlife and Parks as Winter Range Riparian Areas. The proposed Development also exceeds a maximum density of 1 unit per 20 acres. Proposed on big game winter range where policy 4.7 states that a maximum density of 1 unit per 20 acres should not be exceeded.”

#### **b. Flathead County Subdivision Regulation regarding Natural Environment**

**3.2 NATURAL ENVIRONMENT TO BE PRESERVED:** *The design and development of subdivisions shall contain satisfactory building sites which are properly related to topography and shall preserve the natural terrain, natural drainage, existing top soil, trees, natural vegetation, **wildlife and fish habitats to the extent possible.** The County Commissioners may impose landscaping requirements on the subdivider or homeowner.*

#### **Analysis**

The applicant's EA notes the following, “All of the property contains wildlife habitat to some degree.” (pg. 8). The EA also notes that a habitat assessment was completed by Herrera Environmental Consultants. The EA includes a synopsis of their findings but a complete report of their analysis was not submitted with the application and is not on file with the Flathead County Planning Department. The EA references only those recommendations from the Herrera report that the developer intends to implement.

The following description of wildlife activity is excerpted from the Montana Fish, Wildlife and Parks letter dated 4/11/07 and submitted as comments on the applicant’s original submission.

“White-tailed deer, black bear, mountain lion, elk and moose frequently utilize this area. Mule deer and lynx can also occur in the area on occasion, along with the typical complement of smaller native mammals, birds, amphibians, and reptiles. Grizzly bears, as stated in the EA, could occupy this general area in the future, and a sighting would not be surprising currently. Wolves, which were not mentioned in the EA, could also be expected to inhabit the general area in the future, as there is currently a known pack within 15 miles of the proposed subdivision, and transients would be expected currently (a collared wolf was documented within 1 mile of the proposed subdivision, and there was also a sighting.) The development would occur in low-to-medium-density ungulate winter range (primary white-tailed deer) depending on winter severity and location within the proposed subdivision. Average densities of ungulates would occur throughout the area of the proposed subdivision from late spring through early fall. The development also lies in prime bear and lion habitat.” (pg. 1)

The letter also notes that the proposed development is much larger and denser than what has previously occurred in the Lakeside area and that the potential for human/wildlife conflicts is high. It also notes that although the EA states that vast areas of open space have been set aside and that large expanses of land will be maintained in a predominantly natural state, the CC&Rs have reserved the right to establish various types of development in these spaces. The letter states that this development will convert, "...wildland into an island of urbanization". In regards to development the letter states the following:

"Although Montana FWP , being entrusted with the management of the state's wildlife, has concerns with the development of wildlife habitat area, the only real mitigation for subdivision development is the setting aside of similar wildlife habitat areas through conservation easements or some similar device. Also of pertinent importance to the proposed subdivision, should it be approved, is the protection and safety of the people who will live there and the wildlife that will continue to frequent the area." (pg. 4)

"As indicated previously, the permeability of the current proposed subdivision phases to movements by wildlife will be variable. **Lowered housing densities and more open space would be the only solution to this and would need to be addressed at the master plan level.**" (pg. 5) (Emphasis added)

The FWP contained recommendations for maintaining wildlife corridors. The 7/30/07 staff report noted that the applicant has incorporated some of the recommendations. FWP recommends specific changes to the CC&Rs. A revised copy of the CC&R's showing these changes is not on file.

Even with these mitigation measures, it is clear from the FWP letter that the preferred solution is lower densities and that this needs to occur at the master planning level. Section 3.2 of the subdivision regulations state that designs should preserve wildlife and fish habitats to the extent possible and Section 3.6 incorporates by reference Master Plan provisions. Here, the specifically relevant provision is Policy 4.7 of the Master Plan which provides, "Development of all non-riparian, big game winter range should not exceed a maximum density of one unit per 20 acres". The high density represented in the preliminary plat does not meet these criteria. Although, the applicant proposes to modify the CC&Rs to lessen impacts on wildlife, this mitigation can not substitute for loss of winter range.

## 6. Sewage Treatment

- The Lakeside County Water and Sewer District treatment facility does not have the existing capacity to convey and treat all of the projected wastewater from all phases of the development.
- The proposed development will require expensive upgrades to the conveyance lines and lift station and there is no mechanism in place to pay for these improvements.
- The development did not reserve enough capacity from the LCWSD to serve the development.

### a. MCA and DEQ Criteria Regarding Sufficient Sewage Disposal Facilities

Section 76-3-622 of the MCA regarding “Local Review of Subdivision” requires the subdivider to submit information regarding sewage disposal, water supply, and wastewater, as follows:

***The subdivider shall submit to the governing body or to the agent or agency designated by the governing body the information listed in this section for proposed subdivisions that will include new water supply or wastewater facilities. The information must include:***

\* \* \*

***(b) a description of the proposed subdivision’s water supply systems, stormwater systems, solid waste disposal systems, and wastewater treatment systems, including whether the water supply and wastewater treatment systems are individual, shared, multiple user, or public as those systems are defined in rules published by the department of environmental quality;***

***(c) a drawing of the conceptual lot layout at a scale no smaller than 1 inch equal to 200 feet that shows all information required for a lot layout document in rules adopted by the department of environmental quality pursuant to 76-4-104;***

\* \* \*

***(e) for new water supply systems, unless cisterns are proposed, evidence of adequate water availability:***

***(i) obtained from well logs or testing of onsite or nearby wells;***

***(ii) obtained from information contained in published hydrogeological reports; or***

***(iii) as otherwise specified by rules adopted by the department of environmental quality pursuant to 76-4-104;***

***(f) evidence of sufficient water quality in accordance with rules adopted by the department of environmental quality pursuant to 76-4-104. . . .***

§ 76-3-622(1), MCA, (emphasis added).

The referenced statute, § 76-4-104, MCA, requires the DEQ to promulgate regulations, and the subdivider to make disclosures, that are in accordance with the following:

- (b) adequate **evidence** that a **water supply** that is sufficient in terms of **quality, quantity, and dependability** will be available to ensure an adequate supply of water for the type of subdivision proposed;*
- (c) evidence concerning the potability of the proposed water supply for the subdivision;*
- (d) adequate **evidence** that a **sewage disposal facility** is sufficient in terms of **capacity and dependability**;*
- (e) standards and technical procedures applicable to **storm drainage plans** and related designs, **in order to ensure proper drainage ways** . . . (Emphasis added.)*

When a developer proposes to hook up to an existing public wastewater treatment system, then the developer must provide evidence that the system is approved by DEQ and:

*Provide evidence that the managing entity has authorized the connections, **the system has adequate capacity to meet the needs of the subdivision**, and the system is in compliance with department regulations.*

See DEQ ARM 17.36.328(2)(b)(i); see also DEQ Subdivision Review Joint Application Form C Wastewater Treatment, C.3.a.(3).

While approval of the sewage system is left to DEQ, disclosure of the required information and review of the system is important at this time since under the Montana Subdivision and Platting Act, MCA 76-3-610(2)

*After the application and preliminary plat are approved, the governing body and its subdivisions **may not impose any additional conditions as a prerequisite to final plat approval** if the approval is obtained within the original or extended approval period as provided in subsection. (Emphasis added)*

### Analysis

According to the “Lakeside Wastewater System – 2007 Preliminary Engineering Report”, the treatment facility has capacity limitations due to limited storage ponds.

“With no improvements to the existing wastewater treatment system, it is estimated that an additional 860 EDU’s could be added before reaching system capacity. As presented above, the limiting component of the facility is the capacity of the existing storage ponds. **Although the treatment facility currently has excess capacity available, given the proposed developments in the planning area is estimated that the storage ponds will be at full capacity in the next 3-8 years, depending on actual growth rates and associated wastewater production.**” (pg. 2-26)

The report notes that the conveyance lines do not have capacity for the increased flows from the development.

“The Eagle Crest Development is currently under construction to the south of Lakeside, and includes approximately 1,000 residences at full build-out. Given the layout of the existing system, all wastewater from Eagle Crest would eventually flow through this piping along Hwy 93 and into Lift Station #5. The 8-inch piping to the north of Adams Street has a minimum of slope of 0.40% with a maximum capacity of 436 gpm or 825 EDU’s. As such, this stretch of gravity main will likely reach capacity prior to full build-out of Eagle Crest. Similarly the 10-inch piping upstream of Lift Station #5 has minimum slope of 0.25%, with a maximum capacity of 660 gpm, or 1,250 EDU’s. This 10-inch main conveys nearly all of the flows generated in the community of Lakeside, including both Eagle Crest and Bear Meadows once they are connected to the system. It is recommended that the District closely monitor flows through this piping as users in Eagle Crest and/or Bear Meadows are added to the system to confirm flow rates and to identify if and when this piping may need to be upsized. **The 8-inch should be upsized to 12 –inch (capacity 1315 gpm) and the 10 inch to 15 inch (capacity 1990 gpm), assuming both developments progress towards full build-out.**” (pg. 2-15) (emphasis added)

The report also notes that the pumps will not be able to handle the increased flows from the development.

“As with the conveyance line, however, it is important to continue to monitor flow rates and run times of the pumps as additional users are added to the system. The proposed Eagle Crest and Bear Meadows development, with approximately 1,400 proposed residences combined, could add an additional peak hourly flow of approximately 600 gpm to the conveyance line. If those two developments do reach full build-out and wastewater flows are as projected, the capacities of the existing pumps in all of the conveyance line lift stations may be exceeded. **If that happens, larger pumps will need to be installed, and possibly larger wet wells to facilitate the increased flows.**” (pg. 2-20) (emphasis added)

Furthermore, the applicant’s EA notes the following:

“As calculated above, it is estimated the current development will produce a peak-hour flow of 708 gpm, while the capacity of existing mains near the connection point appears to be approximately 330 gpm. This indicates that the collection system will not provide adequate capacity to transport the projected wastewater quantities without an upgrade of facilities.”

It is clear that the various components of the existing sanitary sewage system including conveyance lines, lift stations and treatment facilities **do not presently have the capacity** for the all phases of the proposed preliminary plat. According to MCA and

DEQ Administrative Rules, it is required that the **existing public system has adequate capacity**.

Another issue regarding capacity is the amount of capacity that was reserved in the applicant's "Wastewater Treatment Agreement" with the Lakeside County Water and sewer District". The agreement reserves capacity of 176,000 gallons of flow per day. The information provided in the applicant's EA, however, estimates that at build out, average flow required for the phases 5 through 9, plus the already approved phase 4, is 300,000 gallons per day (pg. 12). This exceeds the capacity reserved by the Wastewater Treatment Agreement. Using the formula's from the applicant's EA, the capacity for just phases 5 through 9 is still 240,000 gallons and exceeds the capacity reserved in the Wastewater Treatment Agreement. The discrepancy is due to the assumptions of usage per EDU. The applicants assumes 300 gallon per EDU while the district assumes a usage of around 200 gallons per EDU. The applicant explains that they use a higher number due to the expectation that the average size of a dwelling unit in Eagle's Crest will be larger than the average size in Lakeside. As noted previously, there is also the potential to add additional condominium units on the "mixed-use" lots as well as guest houses, commercial uses and rental guest cabins. It would appear prudent to use the 300,000 gallon estimate and reserve the appropriate capacity accordingly,

## **b. Flathead County Subdivision Regulations Regarding Expenditure of Public Funds**

### ***3.3 LANDS UNSUITABLE FOR SUBDIVISION:***

*"...or where development would place unreasonable burdens on the general public including the requirements of excessive expenditure of public funds or environmental degradation shall not be subdivided for building or residential purposes unless the hazards are eliminated or will be overcome by approved design and construction plans." (emphasis added)*

### **Analysis**

The applicant has entered into a "Wastewater Treatment Agreement" with the Lakeside County Water and Sewer District (LCWSD). The agreement stipulates that the applicant pay \$10,000 per year from 2006 through 2013 and that there be a plant investment fee of \$3,526 for each landowner connecting to the system. The EA estimates that this will generate \$3,011,180 when full build-out occurs.

The “Lakeside Wastewater System – 2007 Preliminary Engineering Report” estimates the following recommended near term improvements to the system.

- 1) Aeration system improvements (immediate) Preferred alternative costs = \$110,000
- 2) Treatment Facility Improvements. Preferred alternative is to expand treatment facility at a cost of \$4,670,000.

As indicated in the above section, the preliminary engineering report identifies significant future public infrastructure improvements necessary that will be for future development specifically related to the Eagle Crest Development.

As noted in the LCWSD letter dated 4/1/07, the District “ ...assumes the plant investment fees from the project will fund the necessary expansion of facilities needed to accommodate the phases of Eagle’s Crest development.” There is no provision for paying for the cost to upgrade the conveyance system or lift station. There has been no cost estimate prepared for improvements to the conveyance system or upgrade of the lift stations to handle increased flows from the proposed subdivision. These improvements can be extremely costly and could be construed to result in the “excessive expenditure of public funds.” (FCSR 3.3) Although the supplemental material from the petitioner dated 8/15/07 indicates their intent to assist with improvements, it does not describe the nature of the intent and there is no MOU or agreement binding them to bear these costs.

## **7. Water Supply**

- The water system design is based on assumptions that underestimate demand.
- The water system design does not meet the standards for fire fighting protection in high hazard fire areas.

### **a. MCA – Evidence of Adequate Water Supply**

#### **76-3-622**

*(e) for new water supply systems, unless cisterns are proposed, evidence of adequate water availability:*

- (i) obtained from well logs or testing of onsite or nearby wells;*
- (ii) obtained from information contained in published hydrogeological reports; or*

(iii) as otherwise specified by rules adopted by the department of environmental quality pursuant to [76-4-104](#);

(f) evidence of sufficient water quality in accordance with rules adopted by the department of environmental quality pursuant to [76-4-104](#);

#### **76-4-104 Rules for administration and enforcement**

(2) *The rules and standards must provide the basis for approving subdivisions for various types of public and private water supplies, sewage disposal facilities, storm water drainage ways, and solid waste disposal.*

(5)(b) *adequate evidence that a water supply that is sufficient in terms of quality, quantity, and dependability will be available to ensure an adequate supply of water for the type of subdivision proposed;*

#### ***Flathead County Subdivision Regulations – Appendix B***

4. *Where a new system is to be used:*

(a) *Provide evidence that the water supply is adequate in quantity, quality and dependability.*

#### **Analysis**

It cannot be determined if adequate evidence of a sufficient water supply is met because the calculations submitted by the applicant appear to underestimate the water demand. On behalf of the FLPA, Mr. Robert S. Rosso, PE performed the following review of the calculations for water usage that were included with the application.

“The Water System Development Analysis proposes a system that may be inadequate for the subdivision needs. **The storm water drainage analysis assumes each developed lot will include 0.25 acres (10890 sq. ft.) of landscaping. However, the Water System analysis assumes only 3000 sq. ft. of irrigated landscape per lot (less than 1/3 of the landscaping assumed in the drainage analysis).** The demand estimated for irrigation would increase from 374,000 gallons per day to 1,357,620 gpd if the same landscaping assumption made in the storm water analysis was used consistently in the water supply analysis. Again, only residential demand is included in the analysis. The future development of common areas to include clubhouses, guest cabins, and other facilities will increase demand on the water supply. The golf course is mentioned; however, no provision is discussed for supplying that high demand for irrigation.

Evidence of sufficient water supply in terms of quality, quantity, and dependability must include demonstration that the design will be based on accurate and consistent assumptions. This subdivision proposal fails to meet these requirements. The well log reports included in the proposal do provide evidence of water supply quantity and quality; however, because of the flawed assumptions these data can not be applied to demonstrate that the requirements can be met.”

Additionally, water demand assumptions are based on a fire fighting standard of 500 gpm. As noted in Section 9 of this report, the standard should be 750 gpm per Section 3.21 of the Subdivision Regulations. As noted in Section 2 of this report, the assumptions are based on a total dwelling unit count of 825 units. Depending on the “mixed-use” lots are developed, the actual number may exceed this amount by as much as 20%.

## **8. Drainage**

- The stormwater drainage system design is based on assumptions that underestimate the amount of impervious surface.
- Surface run-off will have negative impacts on Flathead Lake through non-point pollution.

### **a. Flathead County Subdivision Regulations – Drainage Facilities**

#### ***3.12 DRAINAGE FACILITIES:***

*A. All drainage system and facilities required for any surface runoff affecting the subdivision or exterior access road system shall be designed by a licensed professional engineer and shall meet the minimum standards of the Montana Department of Health and Environmental Sciences and all regulations adopted pursuant thereto, and are subject to approval by the County Commissioners.*

#### **Analysis**

As noted in the letter from Glen Gray of the Flathead County Environmental Health Services, “The only other aspect of the development this office has a concern with is storm drainage. Careful planning will be required as a large amount of run-off will be generated by the paved roads as well as the development on the lots themselves.”

As noted in the memo from Bruce Young, dated June 5, 2007, according to the Montana Subdivision and Platting Act (76-3-610) and the Montana Attorney General Opinion (49 Op.Att’y.Gen.No 7), the applicant must disclose the required information on this critical issue before a decision is made as to whether to approve a proposed preliminary plat.

### **b. Flathead County Subdivision Regulations – Storm-water Run-Off**

#### ***3.12 (B)***

*Drainage plans shall be designed so there is no net increase in surface water runoff from a site after development than what naturally occurred before development.*

## Analysis

On behalf of FLPA, Mr. Robert S. Rosso, PE performed the following is an analysis of the storm water drainage plan.

“The Storm Water Drainage Analysis in the proposal for these subdivisions makes several assumptions regarding the post development condition of the land. Assuming the average home footprint would be 2500 sq. ft., the minimum size of a single-level home mandated by the existing Covenants, Conditions, and Restrictions (CC&R’s), very likely under estimates the amount of impervious surface from this source. The fact that no other impervious surfaces, other than the main roads, are assumed further under estimates the total impervious surface area.

More accurate assumptions include an average home footprint of a more realistic 3500 sq. ft. and an additional 2500 sq. ft. for a garage, sheds, patios, and walkways. It also should be assumed that each lot would also have a 12 ft. wide, 100 ft. long driveway. These assumptions result in a total of 7200 sq. ft. of impervious surface per lot. By using these more realistic assumptions to calculate the post development peak flow runoff for Basin 1 and then applying that change to all 10 basins a more accurate estimate can be determined. The proposal reports a total pre-development peak flow of 38.4 cubic feet per second and a (under estimated) post-development peak flow of 54.5 cfs, an increase of 16.1 cfs or 42%. By using the more realistic assumptions the resulting post development peak flow is 77.9 cfs, an increase of 39.5 cfs or 103%. This increase is significant and will require storm water control measures that meet requirements of the more realistic runoff estimate, not the low estimate of runoff that resulted from flawed assumptions in the original analysis.

It should also be noted that the original analysis and this, more realistic, estimate considers only the residential portion of the development. The CC&R’s of record provide for future development of common areas to include club houses, RV parking areas, aircraft hangers, guest cabins, and other amenities that will increase storm water runoff. Also, no mention is made of the golf course that will alter the soil and vegetation conditions over significant acreage. Storm water and irrigation along with application of fertilizers, herbicides, and pesticides at the golf course, other common areas and residential landscapes will also create polluted runoff that will need to be controlled. This “non-point” source of pollution will contaminate the total runoff, not just the additional post-development portion. Post-development storm water runoff allowed to drain onto neighboring properties because it is at pre-development volumes will be polluted from these non-point sources within the development.

The August 15, 2007 memo from Morrison Maierle, Inc., representing the developer, to the Flathead Co. Planning & Zoning Office makes the statement, “... Flathead Lake is unlikely to be affected by the proposed subdivision. In addition, the distance (greater than one mile) that Flathead Lake is from the proposed subdivision increases the possibility that there is minimal chance that the subdivision water system impacts to the aquifer will extend to Flathead Lake.” However, **the subdivision is less than**

**one mile from Flathead Lake.** More importantly, drainage basin 5 drains storm water runoff over a distance of less than one mile into Hughes Bay. Only an in-depth geologic study of topography and soils would help quantify the extent of the affect the polluted runoff from this subdivision will have on Flathead Lake.”

*Figure 2: Mud resulting from stormwater runoff in yards on the east side of US Hwy 93 between Peaceful Bay and Eagle’s Crest. (Spring, 2007)*



*( Source: Bruce Young)*

## 9. Roads

- The applicant's TIS indicates that left turning movements from the subdivision onto US93 during peak periods will result in gridlock conditions.
- MDT has only accepted the TIS for phase 5. There is no accepted TIS for phases 6 through 9.
- Ten cul-de-sacs exceed the maximum permitted length for roads in high hazard fire areas.

### a. Flathead County Subdivision Regulations & Master Plan

#### *Section 3.3 Lands Unsuitable for Subdivision*

*Lands on which there is evidence of hazards such as flooding, snow avalanches, rock falls, land slides, steep slopes in excess of 30% or more grade, subsidence, high hazard fire areas, high water table, polluted or non-potable water supply, high voltage lines, high pressure gas lines, air or vehicular traffic hazards or congestion, or other features which may be detrimental to the health, safety or general welfare of existing or future residents, or where development would place unreasonable burdens on the general public including the requirements of excessive expenditure of public funds or environmental degradation shall not be subdivided for building or residential purposes unless the hazards are eliminated or will be overcome by approved design and construction plans. (Emphasis added)*

#### **Master Plan Goal 6A**

*Goal 6A: Safe and dependable access to all developed land in the county.*

#### **Analysis**

The petitioner did submit a Traffic Impact Study (TIS) with the original application and the study was reviewed by the Montana Department of Transportation (MDT). The TIS determined that at build-out, the left turning movement from the development onto US 93 from the north entrances will be at a Level of Service (LOS) F during both the AM and PM peak hour. The left turning movement from the south entrance will have a LOS D during the PM peak hours. Level of Service (LOS) is a standard way to measure the impacts of congestion of new development. LOS can be defined as the quality of service to given volumes (or flow rates) of traffic. Different measures of LOS include volume to capacity ratio, travel times, speeds, total delay, probability of delay and safety. The LOS scale ranges from A to F with A, B, and C considered as good or average operating conditions and LOS D, E or F as below average to gridlock conditions.

An LOS F is of concern due to congestion at the intersection and due to safety of drivers who become impatient and attempt to make inadvisable left turns into on-coming traffic. The improvements recommended by MDT only address turning movements from US93 into the subdivision and does not address turning movements from the subdivision

onto US 93. The LOS for the subdivision is directly related to the amount of traffic generated by projected number of homes. A development with lower density and fewer homes would improve the LOS level.

The MDT letter dated 7/11/07 recommends a left turn lane on US 93 for the north entrance to accommodate phases 1 through 4 and recommends a left and right turn lanes on US 93 for the south approach to accommodate phase 5. **Additionally, MDT only accepted the TIS for phases one through five. The developer will need to prepare another TIS for phases six through nine.** An approved TIS for all phases should be available prior to approval of the preliminary plat in order to evaluate the subdivision impacts in accordance with Section 3.3 of the Subdivision Regulations.

## **b. Flathead County Subdivision Regulations Road Standards**

### **Section 3.9 – Streets and Roads – Design Standards – Table 3**

*Footnote # 1: In high hazard fire areas maximum cul-de-sac length is 750'*

#### **Analysis**

As noted in Figure 3 of this report, the subject property is located in an area that the Community Wildfire Fuels Reduction Plan (2005) classifies as “Extreme” Fire Risk Level. With this classification, the standard in Table 3 regarding cul-de-sac length in high hazard fire areas should apply. According to the information the following cul-de-sacs exceed the maximum length of 750’.

<u>Street Name</u>	<u>Length</u>
▪ Crossbill Way	1000’
▪ Flagstick Lane	1000’
▪ Sandwedge Road	923’
▪ Greenside Lane	2,755’
▪ Paintbrush Way	1000’
▪ Raptor Road	790’
▪ Lockwood Lane	799’
▪ Riverboat Road	925’
▪ Waterthrush Way	904’
▪ Big Lake Lane	934’

The applicant did request a variance for Greenside Lane to exceed 1000’. The variance was not evaluated based on the standard for high hazard fire areas, and no variances have been requested for the other non-conforming cul-de-sacs.

## 10. Emergency Services – Fire Protection

- The subject property is located in area classified as “Extreme” Fire Risk in the Community Wildfire Fuels Reduction Plan.
- There are approximately 50 lots that are prohibited under standards for High Fire Hazard Areas. (FCSR Section 3.21)
- Secondary access to the subdivision has not been evaluated for emergency vehicle use.
- A satellite fire station will be required for the subdivision but there is no mechanism in place to finance the improvement.
- Fire fighting costs in the wildland-urban interface are increasing.
- Building sites do not comply with recommended guidelines from DNRC on fire protection standards in the Urban – Wildland Interface.

### a. Flathead County Subdivision Regulations – High Fire Hazard Areas

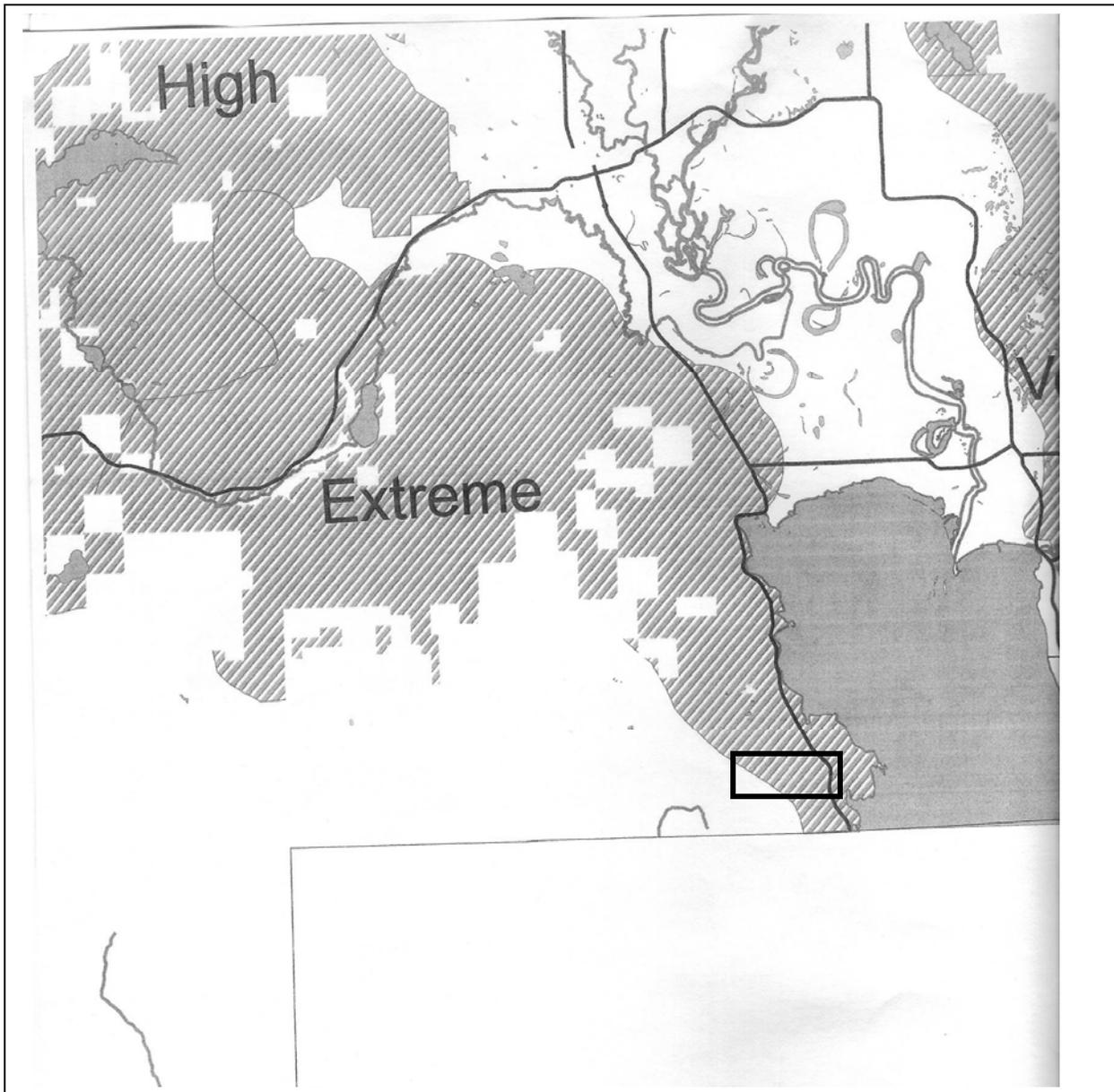
#### *3.21 High Fire Hazard Areas – Special Standards*

*C. Building sites shall be prohibited on any slope that exceeds 30% when located in areas where the general slope characteristic exceeds 30% and at the apex of "fire chimneys" (topographic features, usually drainage ways or swales, which tend to funnel or otherwise concentrate fire toward the top of steep slopes).*

#### **Analysis**

According to Figure 3, the development is located in an area that is classified as “Extreme” Fire Risk by the Community Wildfire Fuels Reduction Plan. The staff report notes that there are approximately 50 lots where the general topography exceeds 30%. Although the applicant submitted a slope analysis to locate building pads on each site, Section 3.21 **prohibits** building sites in high fire hazard areas.

Figure 3 : Community Wildfire Fuels Reduction Plan. WUI and Communities at Risk Analysis



Source: 2005 Flathead Community Wildfire Fuels Reduction Plan.

Note: The data is developed by the USFS Northern Region National Fire Plan Cohesive Strategy Team.

 = Approximate Location of Proposed Eagle's Crest Subdivision

## B. Flathead County Subdivision & Master Plan - 1997

### Subdivision Regulations

*3.8 (D) The Commissioners shall require multiple accesses into a subdivision in high hazard areas.*

### Master Plan Policies

*8.3 In fire hazard areas (timber areas) secondary access out of all subdivisions and developments should be mandatory.*

The staff report dated 8/21/07 contains the following statement:

A fire hazard exists for all lots in Phase 5, Phase 6, and Phase 7 that will access Backnine Road, Bramble Lane and Meadow Lane. Bramble Lane merges onto Backnine Road which merges onto Meadow Lane which provides the only access into and out of those portions of the subdivision. Essentially, a “bottle neck” is created at the fork of Meadow Lane and Backnine Road, which if blocked in the case of a fire would leave roughly 490 dwelling units without an escape route. (Pg. 14)

The report notes that there is an emergency access easement extending south from Mountain Gates Road and looping back into Raptor Road Extension. This emergency access is located on Section 31 on what appears from the aerial to be an unpaved logging road. There is no documentation as to the whether the road grade or geometrics have been reviewed by the Somers Fire Department to determine if it would be sufficient for emergency vehicles. The location and length of the road on Section 31 has not been indicated so it is also unknown what the response times would be for using this access.

### c Flathead County Subdivision Regulations

***3.3 LANDS UNSUITABLE FOR SUBDIVISION:*** *Lands on which there is evidence of hazards such as flooding, snow avalanches, rock falls, land slides, steep slopes in excess of 30% or more grade, subsidence, **high hazard fire areas**, high water table, polluted or non-potable water supply, high voltage lines, high pressure gas lines, air or vehicular traffic hazards or congestion, or other features which may be detrimental to the health, safety or general welfare of existing or future residents, or where development would place unreasonable burdens on the general public including the requirements of excessive expenditure of public funds or environmental degradation shall not be subdivided for building or residential purposes unless the hazards are eliminated or will be overcome by approved design and construction plans. (emphasis added)*

## Analysis

The letter from the Somers Volunteer Fire Department dated May 9, 2007 states that there will be a need to establish a satellite fire station in the project. The 8-15-07 memo states that the Homeowner Association would bear most of the cost and volunteer effort for this satellite station. There is no MOU or other agreement which binds the Association for the costs or provides an indication of timing for building the station. There is no recommended condition of approval that would require the Association to enter into such an agreement. Additionally, the application materials repeatedly states that the homeowners are to be primarily seasonal residents, so it is not clear who will be available to provide the volunteer base.

Additionally, the Community Wildfire Fuels Reduction Plan defines the area is located in the “Wildland-Urban Interface”. Statistics from the Department of Natural Resources and Conservation (DNRC) indicate that there is a high public costs to fighting fires in the Wildland-Urban Interface. DNRC is the agency with primary responsibility for wildland fire protection on state and private lands. There is State Trust Land immediately adjacent to the site (see Attachment F). Following is an excerpt from the DNRC report, *State Wildfire Suppression and the Wildland-Urban Interface*, January 2007, regarding costs of fighting fires in these areas

“The fire report data show that for fires occurring on DNRC direct protection from 1996-2006, fires in the WUI cost an average of 46% more to suppress than non-WUI fires. WUI fires cost a total of \$74.9 million over this period, whereas non-WUI fires cost \$51.4 million. This increased cost of fire suppression in the WUI is largely due to the higher costs in the WUI associated with suppressing larger fires. Large fires cost 49% more in the WUI than the non-WUI areas likely due in part to greater costs associated with structure protection – structural fire engines and aviation costs (retardant and helicopters). Structure protection often involves creating buffer zones around the structures by removing vegetation, pre-burning around the structures to remove potential fuels, and pre-treating homes with foam, aluminum wrap, and/or other products. These tactics require additional effort and resources. Small fires in the WUI do not exhibit this same large increase in cost likely because they are controlled before structure protection costs are incurred.”

(<http://www.dnrc.mt.gov/forestry/Publications/Documents/2006firecostreport.pdf>)

#### **d Subdivision Regulations - 3.21 High Fire Hazard Areas – Special Standards**

*E. A water supply of sufficient volume for effective fire control shall be provided in accordance to the following standards:*

- 1. A minimum of 500 gallons per minute for lots one acre or larger.*
- 2. A minimum of 750 gallons per minute for higher densities.*
- 3. Where no central water system exists, the local fire chief may recommend other solutions including but not limited to the provision of tanker recharge facilities and the sprinkling of individual buildings.*

#### **Analysis**

The applicant is proposing to create at least 821 residential and commercial units on 777 acres. This results in a density higher than 1 unit per acre. Consequently, under provision 3.21(E) (2) of the subdivision regulations, a minimum of 750 gallons per minute is required for fire control. The applicant's supplementary memo dated 8/15/07 indicates that the Eagle Crest design only provides for 500 gallons per minute.

#### **e Flathead County Master Plan - 1997**

##### Policies

*8.1 All structures built in the County should incorporate adequate setbacks to promote safety and to deter the spread of fire.*

*8.2 All subdivisions should be planned, designed constructed and maintained so as to minimize the risk of fire and to permit efficient suppression of fire.*

#### **Analysis**

The subdivision has incorporated a number of firewise principles into the building design standards and the covenants. The site, however, is located in the Wildland-Urban Interface (WUI) that is adjacent to State of Montana School Trust Land. The land is managed and fire fighting protection is provided by the Montana Department of Natural Resources and Conservation (DNRC). The DNRC has fire protection guidelines for the residential construction in the WUI. (See Attachment G) For slopes from 20% to 30% it recommends a minimum lot size of 1.5 acres and recommends no building on lots exceeding 30%. Approximately 80% of lots in the proposal do not comply with this recommended standard.

*Figure 4: Photo from Fire near Seeley Lake, MT – 2007*



*Figure 5 : Photo from Black Cat Fire near Frenchtown – 2007*



## 11. Land Use

The 1987 Master Plan Land Use Map indicates that this area is designated for agriculture and silviculture. The proposed subdivision is not in compliance with the land use designation for this Plan.

Additionally, the subject property is located in the area covered by the Lakeside Neighborhood Plan. As noted in the memo submitted by Bruce Young dated 6/5/07:

“As a result of the recent adoption of the Flathead County Growth Policy, all neighborhood plans will be undergoing review in order to ensure compliance with the policies and goals set forth in the Growth Policy. The Lakeside Neighborhood Plan will be coming up for review in about six months, and a project of this size and scope, which will permanently change the character of the our area should appropriately be considered as part of that discussion. “

Many of the issues in this memo regarding density, infrastructure capacity, traffic improvements, and environmental impacts should be examined not only for this proposed development but in the larger context of other developments occurring or proposed in the area. Minutes for the LCWSD indicate that they have proposals amounting to more than 2500 new units. This type of growth would best be considered as part of the neighborhood/growth policy planning process.

## 12. Findings

The following findings support the denial of the preliminary plat for Eagle’s Crest Subdivision Phases 5 – 9.

1. Significant portions of the subject site for Eagle’s Crest Phases 5-9 has slopes exceeding 30% which is evidence of hazards as enumerated in Section 3.3 of the Flathead County Subdivision Regulations regarding “Lands Unsuitable for Subdivision”. Since there has been no geotechnical report submitted with the application including a geotechnical review of the actual subdivision design, there is **insufficient information** to determine the degree of risk from such hazards or potential mitigation measures, but from what information is available there are severe limitations for construction and development at the levels proposed.
2. The preliminary plat for Eagle’s Crest Phases 5-9 has 59 lots with general slope characteristics exceeding 30%. The slope analysis that was submitted does not account for margin of error in calculating the cross slope for building pads. There is **insufficient information** to determine if these lots comply with Sections 3.6 or Appendix A of the Flathead County Subdivision regulation. Field verification may indicate that many lots do not comply with this standard.

3. The preliminary plat for Eagle's Crest Phases 5-9 has 59 lots with general slope characteristics exceeding 30% **does not comply** with Section 3.21 of the Flathead County Subdivision Regulations prohibiting such building sites in high hazard fire areas.
4. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with Policy 4.12 of the 1987 Master Plan due to the subject property containing soils that have at least four limitations for road construction that are listed in this policy.
5. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with policy 4.13 of the 1987 Master Plan due to the subject property containing soils that have at least four limitations for residential construction that are listed in this policy.
6. The Environmental Assessment for the preliminary plat for Eagle' Crest Phases 5-9 does not contain any information on the effects of run-off into Flathead Lake and therefore **does not comply** with MCA Section 76-3-603 (1)(a) that requires a description of every body of water that may be affected by the proposed subdivision.
7. Since there is no analysis of the impacts on Flathead Lake, there is **insufficient information** to evaluate these impacts in accordance with Policy 3.1 and 3.5 of the 1987 Master Plan. From the evidence that is available, it appears that stormwater run-off and non-point pollution will negatively impact the lake.
8. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** 1987 Master Plan Policy 4.6 regarding density of one unit per 20 acre for developments in big-game winter range.
9. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with Section 3.2 of the Flathead County Subdivision Regulations to preserve wildlife habitats to the extent possible. Although the proposal has incorporated some mitigation measures recommended by Montana FWP, it does not address the recommendation to lower housing density and more open space to allow permeability for movement of wildlife.
10. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with Section 3.3 of the Flathead Subdivision Regulations regarding, "...excessive expenditure of public funds". The Lakeside Wastewater System – 2007 Preliminary Engineering Report identifies upgrades to the conveyance system and lift stations that can be directly attributable to this development when it reaches build-out. There is no mechanism in place for the developer to pay for these future improvements.
11. The preliminary plat for Eagle's Crest Phases 5 – 9 **does not comply** with MCA code and implementing regulations because the "Wastewater Treatment Agreement" only reserves capacity for 176,000 gallons average daily flow while the applicants EA estimates an average daily flow of 300,000 gallons. As noted previously, the conveyance system and the lift station at current capacity can not accommodate increased flows from the subdivision.
12. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with requirements of the MCA code and implementing regulations that there is demonstration that a

sewage disposal facility is sufficient in terms of capacity and dependability. The Lakeside Wastewater System – 2007 Preliminary Engineering Report notes that the storage ponds only have capacity for 3 to eight more years.

13. The information for the preliminary plat for Eagle's Crest Phases 5-9 contains conflicting information for water usage depending on whether they are calculating water usage for irrigation or for storm water run-off and does not account for water use for the golf course, commercial uses, guest houses or guest cabins. The proposal **does not comply** with Sections 76-3-622 and 76-4-104 of the MCA because evidence has not presented to determine if adequate supplies are available to meet **all** of these uses.
14. The projections for water usage **do not comply** with Section 3.21 of the Subdivision Regulations for water demand for fire fighting in high hazard areas.
15. The assumptions to calculate storm-water run-off for Eagle's Crest Phases 5-9 do not include calculations for impervious areas due to driveways, guest houses, garages, sheds, patios and walkways. Nor does it account for the impervious areas related to parking lots for the commercial uses. Consequently, there is **insufficient information** to determine if the proposal complies with section 3.12(B) of the Flathead County Subdivision Regulations.
16. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with Section 3.3 of the Flathead County Subdivision Regulations regarding vehicular traffic hazards or congestion due to a projected Level of Service (LOS) F for turning movements from the subdivision onto US 93.
17. The preliminary plat **does not comply** with Section 3.9 of the Flathead County Subdivision Regulations because 10 cul-de-sacs exceed the maximum length permitted in high fire hazard areas.
18. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with Section 3.3 of the Flathead County Subdivision Regulations regarding excessive expenditure of public funds due to the project generating the need for a satellite fire station located within the development. There is no mechanism in place for the applicant to pay for the costs of building and outfitting this station.
19. The preliminary plat for Eagle's Crest Phases 5-9 **does not comply** with policies 8.1 and 8.2 of the 1987 Master plan requiring adequate setbacks and design to minimize the risk of fire and to deter the spread of fire. The property is located in the Wildland-Urban Interface located directly adjacent to DNRC land. Lot sizes do not follow recommended DNRC guidelines for development in these areas.
20. The preliminary plat for Eagle's Crest Phases 5-9 does provide for a secondary access in compliance with Section 3.8(D) of the subdivision regulations. The slope and geometrics for this access have not been submitted or evaluated. There is **insufficient information** to determine if this access is adequate for fire fighting purposes. From what evidence is available, the logging road travels through steep terrain and will not be paved.



## **ATTACHMENTS**

- A. NRCS Soil Reports
- B. USGS Topographic Map
- C. Watershed Map
- D. Excerpts from “Montana Non-Point Pollution Management Plan”
- E. Montana FWP – Elk, Mule Deer and White Tail Deer Range Map
- F. Land Ownership Map Adjacent to the Site
- G. Excerpts from DNRC Fire Fighting Protection Standards
- H. Fire Fighting Articles