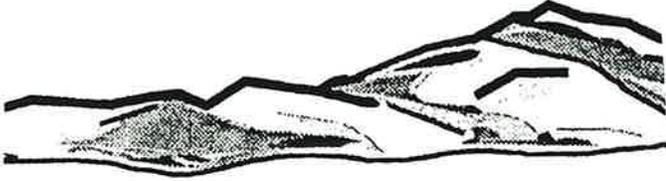


Kenneth G. Rowberg
Planning Director

El Paso County Planning Department

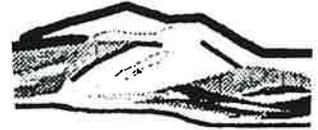


*Reviewed by
André
Brackin*

Carl F. Schueler
Assistant Director

ent

2608



TO:

DATE: 09/08/2000

- County Attorney
- County Hydrogeologist
- Dept. of Transportation
- Parks
- Health Department
- S. C. S. District
- Comprehensive Planning
- Regional Building Dept.
- State Board of Land Comm.
- Colo Div of Wildlife

- State Water Engineer
- State Forest Service
- Colo Spgs Municipality
- Airport Advisory Commission
- State Highway Department
- M.T.T.F.
- Upper Blk Squirrel Grndwater Dists.
- US Army COE
- Paint Brush Hills/Falcon Hills
- Univ Colo c/o Parry Thomas

- G.I.S.
- School District #49-Falcon
- Fire Dept.
- Military
- 911
- Utility
- Meadows Homeowners' Assn.
- Falcon Property Owners.
- B F Land Use Committee
- BF Trails Assn

ATTENTION:

This letter and the enclosed information are sent to your office to notify you that certain land requests are scheduled to be heard at the Planning Commission hearing on OCT 17, 2000.

We request that your office provide our Department with recommendations regarding the items listed below.

It is requested that your response be received by this Department by OCT 2, 2000.

If you have questions or require assistance, please feel free to contact me at 520-6300.

Thank you,

mg

Mark Gebhart - mark_gebhart@co.el-paso.co.us

*Note: Full Report Available for
review at Planning Dept. and
County DOT (André Brackin)*

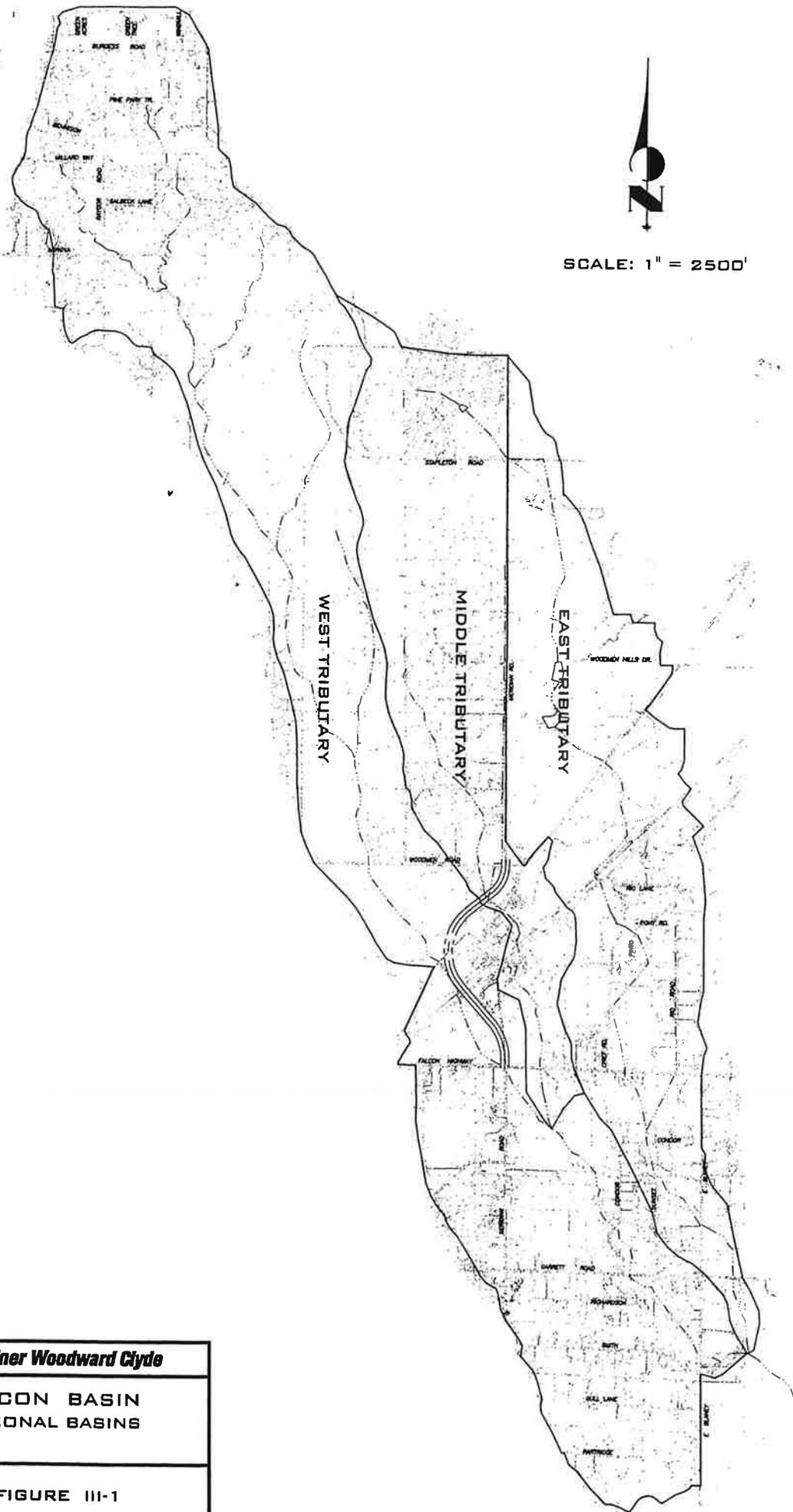
ITEMS:

*Adoption of fees to implement the study is scheduled for BOCC
action Oct 19.*

MP-00-001

DRAINAGE BASIN PLANNING STUDY FALCON BASIN

A request by El Paso County Department of Transportation and URS for adoption of the Falcon Basin Drainage Basin Planning Study as an amendment to and component of the El Paso County Master Plan. The Falcon Basin begins in southeastern Black Forest, and drains southeasterly through the townsite area of Falcon, and includes approximately 10.3 square miles of land.



URS Greiner Woodward Clyde

**FALCON BASIN
REGIONAL BASINS**

FIGURE III-1

EXECUTIVE SUMMARY

The Falcon Basin covers a total of 10.3 square miles in unincorporated El Paso County, Colorado. Of this total, the West Tributary encompasses approximately 5.8 square miles, the Middle Tributary 2.0 square miles, and the East Tributary 2.5 square miles. The basin trends in generally a south to southeasterly direction. At this time, approximately 30 percent of the basin is developed. Much of this existing development consists of 5 Ac and larger agricultural parcels south of US Hwy 24. Higher density residential developments such as Paint Brush Hills and Woodmen Hills are underway in the northern portions of the east and middle tributaries.

There are numerous major drainage issues within the basin, in addition to the challenges posed by future development. Most residential development within the basin occurred prior to established County Engineering Criteria. Undersized facilities at major roadway crossings, erosion, and the lack of maintenance on existing private ponds typifies existing drainage problems. The majority of culverts in the basin are undersized according to El Paso County Drainage Criteria. Runoff backs up at these crossings, flooding roadside ditches, washing out driveways and in some cases threatening existing structures. On the downstream side of these crossings, channels see existing condition flows that are greatly reduced from natural "historic" flows. Thus the perception of downstream property owners may be that improving these roadway facilities will dramatically increase runoff to their properties. Channel improvements and regional detention facilities are proposed to mitigate these increased peak flows and existing erosion. Several existing private stock ponds cause flooding impacting adjacent properties, the most notable of which is on the West Tributary, north of Garrett, just west of Condor. Improving the spillway capacity of this and similar ponds will help to reduce these problems, but such improvements can only be performed by the property owner or by permission of the property owner.

Developed condition hydrology was modeled using proposed land uses approved by County personnel. Regional detention facilities are recommended on each of the three major tributaries. Four major facilities have already been constructed within the Woodmen Hills Development and so are not included in the cost estimate calculations, but are included in the hydrologic model. An additional pond is proposed for the East Tributary in the proposed commercial area at the northwest corner of Stapleton and Meridian Roads in Paint Brush Hills. Regional detention structures are also proposed for the middle tributary southeast of Woodmen and Meridian Roads, and for the West Tributary between SH 24 and Tamlin Road. These ponds are located in the middle portion of the basin for several reasons:

1. Large parcels of land are not readily available in the basin south of SH 24, which currently is developed as 5 Acre or larger lots.
2. Over-detention further upstream was not cost effective nor hydrologically efficient

3. SH 24 crossings were replaced by CDOT in 1999 based on existing hydrology upstream, not proposed land uses; thus detention would be necessary to mitigate any upstream development at these crossings.

Several types of channel improvements are recommended within the basin. In most cases, two alternatives have been called out on the preliminary design sheets. The cost estimate was prepared for the selected alternative, Alternative A. Alternative B provides optional channel treatments to be considered during final engineering depending upon specific land uses while still providing similar protection. In many cases channelization is required to define and contain the flow where it is currently overland flow in poorly defined, broad, dry-grass swales. Geotextile linings are recommended for several reaches, while drop structures and grade control are recommended for others. Hard linings are generally not recommended due to their expense, maintenance, environmental and hydraulic issues. Drops are preferred to be less than three feet high to enable wildlife to migrate upstream.

Cost estimates were based on recommended improvements as called out on the preliminary design drawings, alternative A. They include 20% contingency and 10% engineering. No estimated for costs for local or initial systems has been made, and therefore no costs attributable to local or minor drainage systems have been computed in the estimation of the drainage basin fee.

Fees were calculated on a per impervious acre basis according to the new fee structure adopted by the County September 13, 1999. A total of 3888 acres is estimated to be currently unplatted and subject to future development. This unplatted land is projected to have an average imperviousness of approximately 21%, corresponding to approximately 808 unplatted impervious acres. All drainage and bridge fees are calculated per *impervious* acre.

The following table summarizes the total costs for improvements within the Falcon Basin and the associated fees.

	Total Cost	Fee per Impervious Acre
Bridges	\$1,380,125	\$1708
Pond Land Acquisition	\$ 775,453	\$ 960
General Drainage (Including ponds, channels, Falcon town center storm sewer, etc.)	\$3,099,339	\$3836
Total	\$5,254,917	\$6503

The fee calculation is based upon all improvements within the Falcon Basin being funded by drainage fee revenue. Developers may be required to construct Falcon DBPS structures or pay fees associated with their development or a combination of construction and fee payment. El Paso County may elect to construct improvements with Falcon DBPS funds.