American Farmland Trust
Saving the Land that Sustains Us

Full Mitigation of Farmland Development: A Proposed Approach

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Given the inexorable growth in California's population, the main challenge facing farmland preservation is how to encourage land development that is more efficient – that consumes less land per person – for all uses, residential, commercial and civic. In the Central Valley, for example, for every acre developed, only 8 new residents are being accommodated – an astonishing waste of what is arguably the best farmland on Earth. A mechanism must be found to significantly increase development efficiency, while accommodating the expected population in affordable housing. Graduated mitigation fees that reflect the full opportunity cost of land consumption offer one such approach.

The full impact of farmland development is not being mitigated by the current approach of charging fixed fees based only on preserving an amount of land equal to that being developed. There should also be mitigation for the opportunity cost of developing at low density, as measured by the amount of additional farmland that will have to be developed to accommodate the same population growth. Properly structured, mitigation fees would not just fully compensate for the farmland actually consumed by development, but also encourage more efficient development that is, in effect, "self-mitigating."

The chart below illustrates how mitigation fees could be structured to reflect the additional farmland that would have to be developed – the opportunity cost – based on the quality of the land and the intensity of development on the subject parcel.

	Example 1	Example 2	Example 3	Example 4
Acreage of Subject Parcel	200	200	200	200
Benchmark Density (DU/Ac)	10	10	10	10
Actual Build-Out (DU/Ac)	4	8	16	4
Dwellings Built	800	1,600	3,200	800
Dwellings Foregone	1,200	400	(1,200)	1,200
Additional Farmland Needed	300	50	(120)	300
Per Acre Value of Farmland	$ 8,000	$ 8,000	$ 8,000	$ 12,000
Opportunity Mitigation Fee	$ 2,400,000	$ 400,000	$ (960,000)	$ 3,600,000
Base Mitigation Fee	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 2,400,000
Total Mitigation Fee	$ 4,000,000	$ 2,000,000	$ 640,000	$ 6,000,000
Per Dwelling	$ 5,000	$ 1,250	$ 200	$ 7,500
Per Acre Developed	$ 20,000	$ 10,000	$ 3,200	$ 30,000

The amount of mitigation is based on a "benchmark" density. This represents a community-wide average that would achieve the goal of preserving a specific amount of farmland over a given period of time – that's the objective. Each community would establish its own benchmark, ideally on the basis of a regional land use "blueprint." For purposes of illustration, the benchmark is established at 10 dwellings per acre, which represents a significant improvement over current residential densities in the Valley. (A comparable benchmark could be established for commercial, industrial and civic development based on floor-to-area and/or jobs-to-area ratios.)

The number of dwellings foregone – that would have to be built elsewhere – is calculated by subtracting the actual number of dwellings to be built per acre from the benchmark density, then multiplied by the acreage of the subject parcel. In Example 1: (10 - 4) x 200 = 1,200 dwellings foregone.

Additional farmland needed is calculated by dividing the number of dwellings foregone by the build-out density of the development on the subject parcel. The benchmark density is not used for this purpose on the theory that one who is building at low density should not benefit from the assumption that others will develop at higher densities. In Example 1: 1,200 ÷ 4 = 300 additional acres needed.

The fee itself is calculated by multiplying the additional acres needed by the average local price of an acre of farmland of comparable agricultural productivity to the land being developed. The assumption is that, since it is difficult to purchase conservation easements in areas where land speculation is widespread – as is the case in much of the Valley – only the purchase of a fee interest in farmland offers an effective mitigation strategy. In Example 1: 300 x $8,000 = $2,400,000. (Comparing this with Example 4 shows how the development of higher productivity farmland would increase the fee accordingly.)

The opportunity mitigation fee would be in addition to the base mitigation fee levied on the development of the subject parcel itself. In Example 1: $2.4M + $1.6M = $4M which translates to $20,000 per acre or $5,000 per dwelling. Considering the current price – and profit potential – of housing in California, a fee of this magnitude seems entirely reasonable.

Nonetheless, developers should be given the opportunity to reduce the fee in any number of innovative ways, among them:

- Purchasing comparable farmland at less than the average price used to calculate the fee
- Reselling farmland purchased for mitigation subject to a conservation easement
- Purchasing conservation easements over a comparable amount of farmland (where possible)
- Purchasing options to buy farmland for mitigation or conservation easements at a future date (exercise potentially funded with zero coupon bonds financed with Mello-Roos type annual fees)
- Purchasing and extinguishing (or possibly transferring) development rights from multiple 10-20 acre "ranchette" parcels rather than a single larger agricultural parcel.

All fees would go into a mitigation bank to be used by local land trusts to finance a variety of conservation transactions, including those listed above. This list is intended only as a start. Given the present limitations of conservation easements, noted above, it is important to devise new ways of mitigating farmland loss.

Of course, the preferred alternative for reducing the fee would be to develop at higher densities. Example 2 shows how increasing the number of dwellings per acre would reduce the per acre mitigation fee. Note that the *per dwelling* fee would decline even more than the *per acre* fee because there would be more dwellings over which to spread the cost. This has an important positive implication for housing costs.

Finally, if development occurs at a density greater than the benchmark, the opportunity mitigation fee would actually be transformed into a credit applied against the base mitigation fee. The rationale is that this developer is doing more than the community expects to reduce farmland loss and should be rewarded. Example 3 shows how a very significant increase in density would greatly reduce the overall mitigation fee and make the *per dwellin*g fee only nominal. (In this example, the fee would actually reach zero at 20 units per acre.)

Conclusions

A mitigation fee that captures the opportunity cost of developing farmland at low-density could result in more farmland preservation, particularly if used to fund innovative alternatives to conservation easements. It would also send a powerful market signal to promote more efficient development and thereby minimize the loss of farmland in the first place.

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