

National Association of Home Builders 2004 National Green Building Conference

The Art of Developing Green
Turning Regulatory Challenges into Opportunities



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- Agency Regulations combined with environmental site features are reducing available lands for development.
- Initial (valid) reaction is the takings perspective on loss of yield and land value.
- But, the regulations are not going to go away and will likely only get more restrictive.
- If environmental stewardship and green building are going to be a priority, we need to find more opportunities to turn these challenges into amenities in our site designs.

Regulatory Issues Affecting Site Design and Development

- Wetlands
- Stormwater Regulations (EPA Phase II)
- Floodplain Regulations
- Greenspace / Open Space Regulations & Zoning



- As a product of 1960's Civil Engineering schooling, wetlands were viewed as "wet land" and I was trained on how to solve that, i.e. digging them up and filling them in:
 - now they are recognized for their value
- The new EPA Phase II storm water regulations significantly raise the bar on water quality issues.
 - developers are starting to see 50-100% increases in the amount of land necessary to meet these regulations above what they are currently using.
- Floodplain regulations are one of the longest standing issues affecting use / yield.
 - criteria, datums, reduction of multi event insurance coverage are all being worked on by HUD & FEMA.
 - solutions and mitigation can be incorporated in the 1st two items.
- Whether for the right or wrong reasons, open space zoning is here to stay.
 - few communities have the resources to pay for it.
 - so, we have to get innovative to get value out of it.

Wetlands

- They never seem to fall conveniently on the property – nature doesn't work that way.
- Look at the quality of the wetland and consider enhancing its' value:



- create bio-diversity
- smaller / linked wetland area for more exposure value.
- they don't have to be mosquito breeders.

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- Wetlands do not follow property lines and will likely be a higher priority in the layout than the property lines.
- Consider cutting into wetland areas to create water surface areas and bio-diversity.
- If hydrology is right, wetlands don't always have to be tucked away in the lowest, hidden corner of the project.
 - develop smaller, linked areas that have more exposure and overall lot value.
- Reduce unwanted side effects (mosquitoes, etc.) by proper attention to water depths and temperature, cleansing vs. stagnant water and careful choice of vegetation.
- Walking trails and limited access design will help get value out of the resource.
- Buyers and owners will pay a premium for a combination of the resource and knowledge that it will be reserved and not developed in the future.
- Wetland shown used to be a fallow farm field.

Wetlands (cont.)



- If mitigation is necessary or allowed, locate and design it wisely.
- Design for long-term maintenance: nature vs. man.
- Maximize exposure physically and / or by views.

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- Example – Mason Valley – converted non wetland fallow farmland to a Class I wetland.
- Existing, on-site wetlands were low quality and would have severely effected project development ability.
- Can't tell by the photo, but this is a 150+/- lot subdivision. Due to site topography, many lots not adjacent to the created wetland had great views of it.
- About ½ of the lots got premiums because of it.
- Cost of construction was easily covered by those premiums.
- Was recognized by both the Department of Environmental Conservation and community hiking trails association.
- Remember, it is not always about cost; increased marketability has a value.

Stormwater Regulations

- **Detention / Retention Facilities are Typical:**
 - perspective historically has been water quantity issues.
 - often tucked away in the lowest corner of the property.
 - function vs. form.



- **Phase II Stormwater Regulations are about Quality:**
 - 3" first flush outlet requirement.
 - 24 hour detention of a 1" rainfall event.

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- Often, these requirements can be combined with wetland issues.
- There will be more temporary ponding:
 - it will take some skill to turn that into an amenity.
- More vegetation for nutrient removal can be an amenity.
- Balance the right combination of water retention and freeboard detention.

Stormwater Regulations (cont.)

- More land will be needed.
- Design for more open, linear, stepped facilities vs. a single large facility:
 - if designed well, they can be an amenity enhance lot values.
 - more localized – phase by phase – improvements with reduced upfront costs.



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- We are seeing a 50% or more increase in the amount of land needed for stormwater management, due to the new regs.
- If site will allow these facilities to be a value added feature, spread them out.
- You may also be able to spread your costs out.

Floodplain Regulations

- Based on elevation and volume storage.
- Look at property effects of floodway and floodplain.
- Likely can't change the flood elevations, but sometimes the flood storage volume issues can be designed around.
- May be able to provide some overall watershed improvement and create a site amenity.



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- Boundaries and info are often hard to get in enough detail, but elevations should relate to site topography.
- Need to respect the potential damaging energy in flood situations.
- Most developers experience is with tributary situations where some design can be incorporated into storm water or wetland considerations.

Floodplain Regulations (cont.)

➤ **Example:**

- large floodplain area, former gravel pit.
- downstream flooding issues in developed areas.
- significant erosion issues on-site affecting downstream maintenance.



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Floodplain Regulations (cont.)

- Example (cont.):
 - stormwater management facility designed to provide extensive flood volume storage.
 - has stood the test of two 100-year equivalent storm events in the past 15 years.



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- Nearly the entire area shown on this portion of the property was in 50 & 100 year floodplain.
- Creek on bottom of rendering is one of the most environmentally significant waterways in the community:
 - is frequently being damaged by flood events.
- Diversion of even higher frequency floods has helped the area.
- Significant premiums and very fast marketing of units around the facility.
- Weekend remote control (boat races between neighbors).

Open Space Zoning

- A Disaster if done for political (close the barn door) reasons.
- A great tool for both community and developer, if done conscientiously.
- There is value in environmental stewardship and preservation, but it's unlikely that the community will pay you for it.
- Open space sells and can provide value added amenities that consumers will Pay for.



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Open Space Zoning (cont).



- Site specific tools are in place throughout the Country:
 - clustering provisions
 - conservative easements
 - park districts
 - trails

- Thinking outside the box (or specific site).
- Consider multiple sites and their different environmental priorities.

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- Community-wide open or greenspace plan often identifies areas or parcels that are a “green” priority.
- It also identifies “white” areas that the development community can reasonably expect development can occur (with proper planning, of course).
- In the example, this community identified a number of parcels that were such a high priority that they floated a bond issue and purchased the development rights.
- Many others were high priority, but there were limits on what the community wanted to spend.

Open Space Zoning (cont).

- Help the community with aspects of their open space / greenprint plan that they may not be able to do themselves.

- Incentive zoning:
 - state-wide enabling legislation. NYS Town Law Section 261-b statute.
 - allows community to modify zoning criteria if developer provides an “incentive”.
 - allows for trading density / units between parcels.
 - developer can prioritize development areas.
 - community can prioritize “green” areas.



- I'm going to give an example of a bigger picture scenario, assuming you will hear a number of site specific examples throughout the overall conference.

- This example allowed the community to preserve identified priority greenspace, that they otherwise couldn't purchase (or buy development rights).

Incentive Zoning Example

Parcel	ZONING DATA		GREENPRINT DATA				APPROVED PROJECT DATA		
	Total Acreage	Total Required Open Space	Total Resource Evaluation Rank	Greenprint Ratings			Greenprint Allowed Units	Approved Incentive Zoning Units	Approved Incentive Zoning Open Space
			Agriculture	Ecological	Other				
Snyder	72.0	36.0	17.0	M	H	L	68.0	71	39.0
Caruso	40.2	20.1	52.0	M	L	L	48.0	48	18
Mascitti	15.3	7.7	68.0	L	L	L	17.0	35	4.4
Clover St.	114.1	57.1	4.0	M	H	H	127.0	97	51.2
Wilmarth	20.7	10.4	72.0	L	L	L	23.0	14	11.1
Harrison Homes	32.3	16.2	9.0	M	H	H	8.0	0	32.3
Total	294.6	147.3					292.0	265	156.0



- Some of the sites purchased were a high priority for some form of preservation (low number).
- Town did not have the resources to purchase the properties, so they would likely compensate by giving the developer a very hard time with development approvals.
- Some sites were low priority for preservation:
 - some also had development constraints other than “green” issues.
- Developer was able to swap units and open space, but the community took a pretty big bite out of the apple:
 - 90% of allowable yield overall, but usually it’s about 75% (219)!



- 33 acres open space conveyed to Town.
- 5 Ac. parkland conveyed to Town.
- Wetland created in fallow farmland.
- Many “premium” lots.

- Density increased.
- Greenspace reduced.
- Needed workforce housing created.
- Very efficient development costs.



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- Allowed the developer to distribute units to various parcels:
 - parcels and locations in the community to better fit price markets.
 - ability to reduce and consolidate construction costs.
 - many premium, value added lots were created.
- Note: Wetland area in top rendering was farm field referred to in one of our first slides.

An Adobe.pdf version of this presentation, with speaker notes, is on our web page:



"To arms! To arms! The bulldozers are coming!"

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Drawing by Robt. Day; © 1966 The New Yorker Magazine, Inc.

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