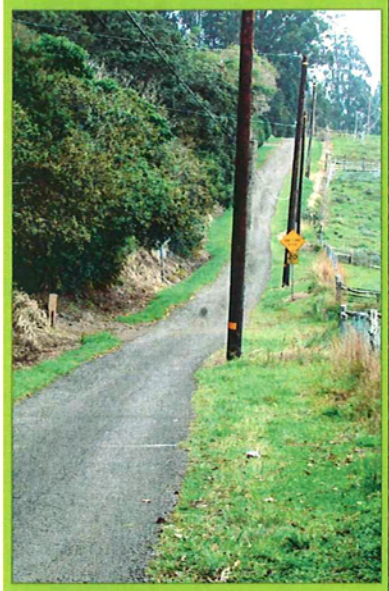
Office of Planning
Department of Business, Economic Development & Tourism
Marine and Coastal Zone Advocacy Council
Ke Kahu O Na Kumu Wai
P.O. Box 2359 • Honolulu, Hawaii 96804



planning for rural areas:
the road less traveled
policies. standards. tools.

OP/CZM Rural Policy & Best Practices Project

Hawaii CZM Program
Coastal Zone Management

Aloha,

Why are you receiving this document?
We believe you are among those keenly interested in the future of rural areas and the important cultural and ecological functions that rural areas serve. Currently, the character and fabric of Hawaii's rural places and her rural landscapes are being transformed, in many places, by uses more characteristic of urban lifestyles and urban patterns of development.

What is in this document?
This document contains selected reprints of material from two statewide rural planning workshops: May 2006 workshops on the nature of *rural*, and rural planning principles and policies to guide rural planning and land use management; and June 2006 workshops on rural development standards and land use techniques that are being used to manage development in rural areas and to maintain rural communities, landscapes, and environmental quality.

Who organized the rural workshops and why?
The workshops are part of the Office of Planning (OP), Coastal Zone Management (CZM) Program's Rural Policy and Best Practices Project. The Rural Project is designed to provide information and guidance on effective approaches and tools for managing rural areas, to aid the State and the counties in responding to legislation seeking recommendations for a more viable State Rural Land Use District.

Why are OP and the Marine and Coastal Zone Advocacy Council (MACZAC) teaming to provide this reprint?
Rural planning is one of several areas in which OP and MACZAC are partnering to inform and stimulate public discussion of ways to improve management and protection of watersheds and coastal and marine resources.

Where can I get more information?
The complete handbooks and all the workshop presentations are available at the OP/CZM Rural Policy and Best Practices Project website at the following address:

http://www.hawaii.gov/dbedt/czm/czm_initiatives/rural.html

We encourage you to visit the website for more information on specific rural standards and tools, as well as case studies of rural and agricultural land use planning and management in Montgomery County, Maryland and Jefferson County, Washington.

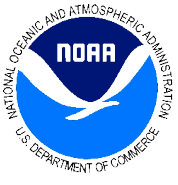
You may also contact the Office of Planning, (808) 587-2817, if you have any questions or would like more information.

Sincerely,

Laura H. Thielen
Director
Office of Planning

Arnold L. Lum
Chair
Marine and Coastal Zone Advocacy Council

The Marine and Coastal Zone Advocacy Council is a public body that advises the Office of Planning on marine and coastal zone management planning, coordination, and facilitation of the functions of the Hawaii Coastal Zone Management Program.



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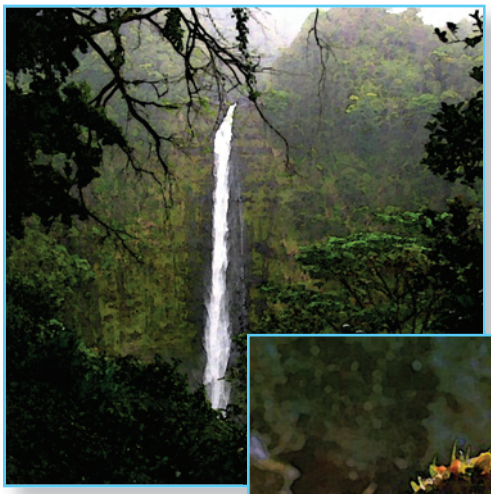
PLANNING FOR RURAL AREAS

THE ROAD LESS TRAVELED

Policies
Standards
Tools

May 2006



HAWAII

Horsley Witten Group

TOWNSCAPE, INC.

Hawaii CZM Program
Coastal Zone Management

NOAA

Planning for Rural Areas: The Road Less Traveled
A workshop of the
Rural Policy and Best Practices Project
May 1-4, 2006

Afternoon Workshop Agenda

12:30	**Registration**
1:00	**Welcome** County Planning Director
1:10	**Current Rural Policy and Project Overview** Laura Thielen, Office of Planning
1:20	**Survey of Rural Landscapes** *A visual montage* Scott Horsley and Richard Delaney (Horsley Witten Group)
2:00	**An Introduction to Rural** *What makes "rural" rural? What is the range of rural land-uses? What is a rural life style? What are rural forms and functions? What are the top guiding principles of developing and preserving rural areas?* Tom Daniels, Professor of City and Regional Planning, University of Pennsylvania
2:50	**Local Planning Strategies for Maintaining Rural Areas-A Case Study** *A detailed examination of one County's continuing successful efforts to effectively protect its rural character.* John Zawitoski, Montgomery County Department of Economic Development
4:00	**Break**
4:10	**Exploring Rural in Hawaii—Q&A/Discussion** *A full group discussion of rural policy and planning with Tom Daniels, Scott Horsley, Richard Delaney and John Zawitoski.*
5:10	**Closing** *Where are we now? What happens next and when?* Laura Thielen and Ruby Edwards

Evening Presentation and Discussion

6:00	**Welcome and Project Overview** Laura Thielen, Office of Planning
6:10	**Presentations on Rural Policies and Montgomery County** Tom Daniels and John Zawitoski
6:30	**Exploring Rural in Hawaii—Q&A/Discussion** *A full group discussion of rural policy and planning with Tom Daniels, Scott Horsley, Richard Delaney and John Zawitoski.*
7:20	**Closing** Where are we now? What happens next and when? Laura Thielen and Ruby Edwards, Office of Planning
7:30	**Pau**

Elements of the Rural Community

Open Space

Open space in rural areas can take several different forms based on design considerations and the location of different open space areas. Public green space can be planned as an amenity while conservation areas can be integrated into residential development through Conservation Subdivision Design. Stream buffers and active agricultural lands are two other examples of open space opportunities that should be identified and preserved where ever possible in the rural setting.

Rural Village Centers

A Rural Village Center typically defines the center of a rural community and is comprised of a cohesive core of residential, civic, institutional, and commercial buildings. Buildings are "human-scale" and arranged along a main street and where applicable, public green space. Development is generally more compact and arranged is a way that facilitates access to a range of commercial and civic uses designed to provide for everyday needs. Higher density housing is integrated into the village center, often above commercial uses and public transportation options provide residents with alternative means of transport to and from their neighborhood.

Rural Corridors

Rural corridors are the roadways connecting rural communities with other rural and urbanized areas. These corridors often become the village center "Main Street" as they pass through the heart of a rural community. These roadways are often overlooked as important resources to rural communities as they establish community character, provide transport routes for goods and services, and serve as a gateway into individual communities. Planners must ensure that zoning does not allow for commercial sprawl along these routes, which creates significant amounts of traffic congestion and spoils the vistas normally associated with well-maintained corridors.

Rural Housing

Rural housing can include a mix of housing types such as high density village center units, single family housing communities along the outskirts of village centers and isolated agricultural housing in larger lots between rural core communities and conservation lands. Based on its proximity to village centers or other urbanized areas, rural housing will have widely varied levels of infrastructure and will often serve a broad range of socioeconomic groups. What is important to plan for in rural communities is the preservation of housing for a diverse population and the provision of adequate infrastructure where higher density housing is desirable.

Cultural Values and Assets

Rural culture is anchored strongly in the history of local land use and focuses on building self-sufficient communities. The way in which people relate to their surroundings in rural areas is unique as there is both a strong presence of natural systems and a well-established working community. In rural settings, agrarian ideals steeped in local culture create the foundation for strong community ties that account for generations of stewardship on working landscapes. Maintaining the cultural connections between individuals, the land they cultivate, their gathering places and their history should be a fundamental consideration in fostering and maintaining rural communities. Physical features of the natural and built environment should be maintained or designed in a way that fosters relationships, connects with the history of the land and creates a lasting sense of place.

Active Agriculture in Rural Residential Communities

As the global agricultural economy continues to shift, diversified agriculture becomes more of a centerpiece for preserving agricultural operations in rural communities. Small family farms, community gardens, so-called "lifestyle farms" and specialty operations are all examples of different types and scales of agriculture that can help sustain rural communities and enhance local quality of life.

Large Lots (Agriculture and Estates)

Large lot estates and/or agricultural operations are often integrated into the fringe areas of rural lands as they approach larger conservation areas. These lots can be used to preserve farming operations and vistas and can leave vast expanses of open space resources along the periphery of rural areas and along corridors. True large lot zoning is generally at least 10 acres but is often 20 to 50 acres per unit or operation. Rural communities that have planned for a diverse housing stock at varied densities are more likely to be able to successfully integrate large lot zoning into the landscape. Communities must be careful to ensure that access to conservation areas from village centers is not cut off through the use of large lot zoning techniques.

Transition Zones (Urban Fringe and Conservation Lands)

Rural communities often serve as a transition zone between urban core areas and conservation lands. In both cases, it is important to clearly define the rural boundaries to prevent the encroachment of sprawl from urban areas and the expansion of rural uses into conservation resources. Urban growth boundaries can be established to clearly establish a separation not only between urban and rural use, but also between different standards for roadway design and infrastructure. Poorly planned boundaries represents one of the leading causes of suburban sprawl consuming established rural corridors and vulnerable agricultural lands.

Human Scale Design

Human scale design implies creating elements of a community landscape appropriate for typical use intensities and day to day access. This approach lies in contrast to over-sizing and over-engineering roads, buildings and parking lots based on worst case scenarios. Overall, this type of design requires thinking about the spatial and access requirements of residents and visitors as primary focus. Walkable connections between different uses and appropriate scaling of buildings in relationship to roads and walkways create a comfortable, manageable space for pedestrians and motorists. Lower impact design elements in roadways also work to calm traffic and encourage alternate means of transportation.

Biographies

Tom Daniels

Tom Daniels is a Professor in the Department of City and Regional Planning at the University of Pennsylvania where he teaches Environmental Planning, Land Use Planning, Growth Management, and Land Preservation.

For nine years, Tom managed the nationally-recognized farmland preservation program in Lancaster County, Pennsylvania, where he now lives.

Tom is the author of When City and Country Collide: Managing Growth in the Metropolitan Fringe, and co-author of Holding Our Ground: Protecting America's Farms and Farmland, The Small Town Planning Handbook, and The Environmental Planning Handbook. He often serves as a consultant to state and local governments and land trusts on growth management and land preservation issues.

John Zawitoski

John Zawitoski is the Director of Planning and Promotions with the Montgomery County Department of Economic Development, where he is responsible for coordinating the various agricultural land preservation programs available to landowners in Montgomery County.

John has worked with the Maryland farm community since 1989. Through his work with the Maryland Department of Agriculture, he helped implement soil conservation and water quality programs at the local, county, and regional level, and assisted other states in developing nonpoint source pollution control programs for agricultural operations. As District Director for the United States Department of Agriculture Farm Service Agency he provided guidance to a number of Maryland counties regarding farm commodity support, rural economic development and other environmental cost share programs.

John holds an Associate of Arts in Forest Technology from Allegany Community College in Cumberland Maryland, and a Bachelors of Science in Agriculture from the University of Maryland.

Scott Horsley

Scott Horsley is the President of the Horsley Witten Group, Inc. Scott has twenty-five years of professional experience in the field of water resources management, and has worked as a consultant to federal, state, and local jurisdictions, and private industry throughout the United States, Central America, the Caribbean, the Pacific Islands, and China.

Scott has taught numerous seminars in water resource protection, and is an Adjunct Professor at Tufts University where he teaches courses in Water Resources Policy and Wetlands Management. He also serves as an instructor for a nationwide series of U.S. Environmental Protection Agency (EPA) workshops on water resources management, and has authored numerous publications on water resources mapping and protection.

Scott is a recipient of the 1999 Environmental Technology Innovator Award from the U.S. Environmental Protection Agency for designing constructed wetlands for stormwater and wastewater treatment.

Rich Delaney

Rich Delaney is an Executive Vice President for the Horsley Witten Group, and directs the firm's coastal management efforts. Rich' work for the firm focuses primarily on integrated coastal management and water resource management. As a firm partner and vice president, he is also responsible for business development, governmental and client relations and project management.

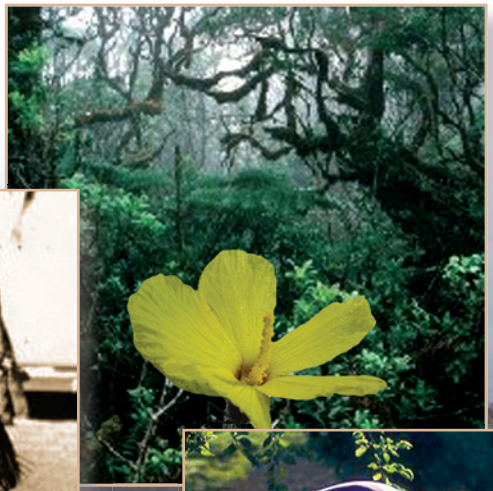
Rich has over 25 years of experience with environmental policy, planning and management issues. As Assistant Secretary of Environmental Affairs and Director of the Massachusetts Coastal Zone Management Program during the 1980's, he was responsible for the development and implementation of comprehensive harbor, coastal and ocean policies, planning techniques and management strategies for Massachusetts. During this time, Rich played a major role in the promulgation of wetlands, waterways and water quality regulations, coastal and waterfront policies and the acquisition of open space in Massachusetts.

Rich was the founding Executive Director of the Urban Harbor Institute, a public policy and research group at the University of Massachusetts Boston during the 1990's. During this period, he provided technical consultations to governments in over 25 countries regarding capacity building, institutional strengthening and public information. As Chairman of the Coastal States Organization, Rich presented testimony before Congressional committees on major US coastal and ocean legislation, budgetary matters and federal-state relations.

RURAL PLANNING

Principles & Techniques

June 2006



HAWAII

Hawaii CZM Program
Coastal Zone Management

Horsley Witten Group

AGENDA

Same program for all workshops

12:30 PM **Registration**

1:00 PM **Welcome**
- County Planning Director
- Laura Thielen, Director, State Office of Planning

1:15 PM **Rural Policy Workshop Revisited**
Tom Dinell or Scott Horsley
- Summary of Prior Workshops
- Highlights of Best Practices: Montgomery County, MD

1:30 PM **Context/Framework for Rural Planning**
Tom Dinell or Scott Horsley
- Assumptions about "Rural" in Hawaii
- Rural Planning Principles Revisited

1:45 PM **Rural Planning Toolkit**
Nick Cracknell, Scott Horsley, or Mark Nelson
- Survey of Workbook Rural Planning Tools
- Introduction to Selected Tools
  1. Zoning Options
  2. Form-Based Codes/Design Guidelines
  3. Conservation Subdivision Design (CSD)
  4. Village Center Service Area Boundaries & Rural Town Infill
  5. Infrastructure Standards
  6. Rural Service Levels
  7. Land Preservation Tools
  8. Rural Economic Development Supports

3:00 PM **BREAK**

3:15 PM **Case study of applying rural tools (& Q&A)**
Josh Peters, Jefferson County, Washington

4:10 PM **Interactive Exercise: "How would you apply these tools?"**
Tom Dinell, Nick Cracknell, Josh Peters

5:00 PM **Wrap-up / Next Steps**
Laura Thielen

5:15 PM **Pau**

Rural Planning Principles

The following are based on rural planning principles presented at the May 2006 workshops by Professor Tom Daniels, Department of City and Regional Planning, University of Pennsylvania.

The following Rural Planning Principles will serve to frame discussions of specific planning techniques that are successfully applied to other rural communities and regions throughout the country. These principles are designed to address the preservation and development of important rural elements that will ultimately create a unique sense of place through a variety of landscapes. The underlined text in each principle is used later in a matrix that is designed to couple these broader principles with specific planning techniques that are introduced in the following section of this workbook.

1. **Plan for both <u>rural preservation and development</u>.**

It is important to plan for both development and the preservation of land and natural resources concurrently in order to minimize or avoid alteration of ecologic and hydrologic functions. This approach also ensures that a more holistic community planning process occurs and a positive community vision is realized. Focusing on both aspects of land use generates support for both regulatory and non-regulatory planning techniques that may be necessary for land preservation to occur. Low impact development recognizes that watershed wide "no-build" scenario may not be realistic, and looks to incorporate preservation techniques into continued economic development on a community and regional scale.

2. **Integrate <u>cultural and historic values</u> and features into rural areas.**

Maintaining the cultural connections between individuals, the land they cultivate, their gathering places and their history should be a fundamental consideration in fostering and maintaining rural communities. Physical features of the natural and built environment should be maintained or designed in a way that fosters relationships, connects with the history of the land and creates a lasting sense of place. In Hawaii, this cultural relationship between residents and the landscape begins with the traditional ahupua`a system and working to foster a mauka-makai system of environmental and economic sustainability.

3. **Minimize or avoid alteration of natural systems.**

It is critical to preserve the integrity of local watersheds by maintaining the natural, pre-developed hydrology of an area. These areas include wildlife habitats, wetlands, floodplains, and steep slopes, now and in the future. Low impact development techniques allow for a functional hydrologic landscape by maintaining natural drainages, such as streams, and by using small-scale stormwater controls distributed evenly throughout the development. The goal is to work with the site characteristics to maintain hydrologic functions and processes and to mitigate impacts that have already occurred. For example, avoiding the disturbance and grading of vegetated areas can significantly reduce the need for stormwater controls and will help to recharge groundwater. Reducing impervious surfaces by reducing road widths, clustering buildings and using permeable surfaces for parking reduces surface runoff and improves infiltration.

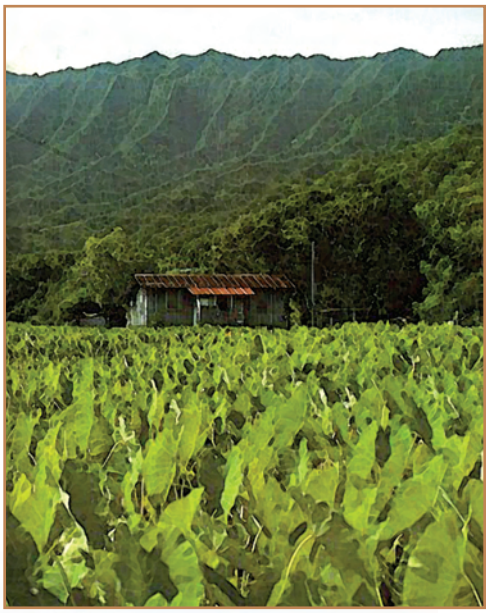
4. **Encourage compact development with a clear edge between villages and the surrounding countryside.**

Maintaining a clear edge between villages and the countryside and natural resource areas minimizes impacts to natural resources and the potential for the siting of incompatible land uses. It also helps to curb residential sprawl into outlying areas and encourage infill opportunities by preventing urban and suburban intrusions into rural areas and prohibiting land developments designed to accommodate expansive and expensive residential structures. A wide variety of planning tools can be used to establish clearly defined edges between the countryside and more densely developed districts. For example, establishing zoning districts with distinct use intensity and design guidelines will help to create breaks in the landscape that establish different but complimentary rural elements. Growth boundaries can also play an integral role in using comprehensive plans and infrastructure service boundaries to delineate areas of varied densities. Local planners can also implement tools such as Conservation Subdivision Design, Low Impact Development and many others to achieve more compact development patterns.

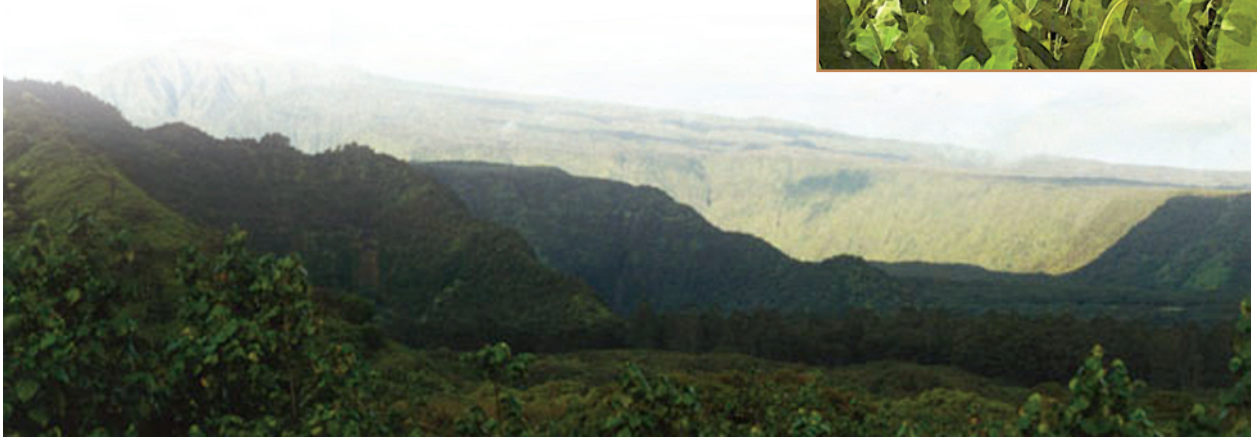
5. Regulate to preserve <u>rural character and form</u>.

It is often challenging to foster a rural style of development from conventional zoning codes that deal exclusively with allowable uses and dimensional requirements. A lack of guidance on issues of design and massing leaves aspects of community character at the discretion of the development community. Recent trends in code development are integrating more specific design guidelines in the form of "pattern books" or "form based zoning". These documents incorporate illustrative codes that incorporate principles of traditional neighborhood design specifically targeted at the challenge of maintaining a particular character of development.

6. <u>Separate lands</u> used for farming, forestry or ranching from rural residential areas.



Separate farm, forestry, and ranching operations from rural residential areas. Avoid the "impermanence syndrome" – when resource-based landowners (farmers, mine owners, etc.) believe that there is very little future for resource activities in their field due to market demands for their land. These areas are vulnerable to sprawl and piecemeal development that can drastically alter community character. Using preservation tools such as acquisition of development rights, taxation polices, and right-to-farm ordinances can help create a more coordinated approach to managing farmland areas.



7. **Establish distinct <u>rural infrastructure standards</u> that protect health, the environment and rural character.**

It is important to minimize the amount of paved surfaces and to clearly define other infrastructure standards in the rural setting to protect the hydrologic balance and community character. This process must be balanced with the need to ensure public health safety and welfare within the rural setting. Maintaining permeable areas allow for natural drainage and decrease chances of flooding. Developing a distinct set of rural roadway and parking lot standards will help to achieve both aesthetic and environmental objectives. When pavement for parking areas and roads become a necessity, techniques for reducing impervious cover and reducing impacts include: providing compact car spaces, utilizing alternative paving in overflow parking, and treating stormwater with the use of alternative, on-site treatment facilities such as bioretention units, and grassed and vegetated swales. Developing standards and guidelines for community water supply and small neighborhood wastewater treatment will provide opportunities for more environmentally sound approaches to these essential services.

8. **Set <u>rural service levels</u> lower than those in urban areas.**

Service levels that will differ between rural and urban areas include those for trash removal, traffic control, telecommunication, emergency response, access, utilities and others. It is important for local authorities to provide outreach materials and information explaining that rural living conditions directly imply lower service levels than those provided in more urbanized areas. These ideas should be framed by an in-depth understanding of a community's fiscal capacity. Allocating funds in accordance with population density (i.e., dollars per capita) provides an framework for reducing service levels in more sparsely populated areas that is easy to understand and enforce.

9. Preserve and maintain working landscapes, natural areas and open space.

Open space areas are an integral component of rural lands and community character. There are several different types of open space areas that emerge from land uses associated with the lifestyle choices of rural residents. Working landscapes, such as farms and ranches, establish a relationship with the land that is different from urban or conservation areas by virtue of the direct physical connection with natural systems. Natural undeveloped areas provide enormous environmental benefit, scenic vistas, opportunities for passive recreation and indirect economic value to rural districts. Other open space areas, such as privately maintained or civic park areas, serve to provide recreational amenities and low impact land uses that help define lower density rural communities. All of these open space areas are often subjected to enormous market pressure as they can be developed into higher value uses such as residential or commercial use. Specific planning tools can be used to conserve these areas while allowing property owners to enjoy a reasonable economic return. Transfer of Development Rights, Purchase of Development Rights, Special Tax Assessments, and public acquisition are several examples within a larger suite of tools that can help preserve these open spaces in rural areas.

10. Promote viability of rural industry.

Rural industries, generally based in a variety of agricultural products and ranching, are threatened by a more streamlined global economy and development pressures associated with "higher value" uses. Faced with these pressures, the challenge to rural communities is to provide tools that help agricultural operations remain profitable. Right-to-farm laws, agricultural incentives, special tax assessments, agricultural easements, and Transfer of Development Rights are several examples within a larger suite of agricultural-oriented tools that can enhance farm land viability. Communities should also look to foster markets for farm products that increase the farmer's share of profits.

11. Employ a variety of planning tools to protect rural areas.

Although successful rural planning programs will be unique to the needs of a specific community, it is essential that local authorities employ a variety of tools in seeking to realize the preceding ten principles. Many of the tools described above are enhanced when combined with other techniques in an integrated approach. The matrix provided in this workbook illustrates how multiple techniques can be applied to assure that rural areas will remain rural now and in the future.

Rural Planning Techniques

ZONING/LAND USE REGULATORY TOOLS

1. Zoning Options

One of the fundamental steps in preserving rural character is examining the basic dimensional and density regulations that govern site development within a Zoning Ordinance. Innovative measures regarding building placement, property yield, setbacks and buildable envelopes can accomplish several basic rural design and or density objectives. With regard to building placement, provisions in rural districts can be incorporated to move buildings toward the front of a lot in order to connect better with the street or to the back of a lot in order to preserve vistas across large open spce tracts. Property yield provisions in agricultural areas can be incorporated that depart from the standard "minimum" lot size approach and focus more flexibly on total development rights. For example, a fixed area ratio zoning code assigns a fixed amount of development rights to a certain acreage (e.g., one development right per 25 acres). Another approach uses a sliding scale where the vested development rights increase in small increments even as agricultural holdings become much larger. For example:

Size of Parcel	# of Development Rights
0-5 acres	1
5-15 acres	2
15–30 acres	3
30–60 acres	4
60-90 acres	5

In either a sliding scale or fixed area ratio approach, the location of the building can be determined by criteria other than standard setback specifications. Placing buildings outside of prime agricultural lands, for example, will help to preserve both rural character through density and agricultural opportunities through building placement.

2. Exclusive Agricultural Zoning

An agricultural protection zoning ordinance is used to designate areas where farming will be encouraged and other land uses discouraged. Ordinances restrict residential density, promote right-to-farm provisions, and authorize commercial agricultural activities, such as farm stands, that add to farm profitability. Agricultural protection zoning can stabilize the agricultural land base by keeping large tracts of land free of non-farm development, enabling the conservation of contiguous agricultural land. Agricultural zoning can complement the growth boundary technique by ensuring that large residential and commercial developments do not "leapfrog" over the growth boundary into agricultural areas. It also provides a buffer to farms preserved by TDR, PDR and through the donation of development rights.

3. Performance Zoning

There are several ways in which Performance Zoning (PZ) can be used as a growth management tool. First, it has been used to develop districts for rural growth areas – especially in areas directly adjacent urban areas. The performance districts offer more flexibility in rural areas providing land owners more development options than is the case with traditional agricultural zoning (10+ acre minimum lot size). This includes clustering and special home uses that are compatible with farming. It also integrates non-contiguous development in cluster developments which can be used to create small villages or permit development around existing hamlets or rural cross roads. A second approach deals more with the ability of the community to supply services or provide adequate roads. Under this approach performance ordinances use a capacity analysis (traffic sheds for roads), water, sewer, soil types for septic systems, geology or well yields for wells. These factors are used to modify the zoning district density. For example, a zoning district might permit two-acre lots (50 homes per 100 acres). An analysis of road capacity on rural roads might yield a capacity of one home per 22 acres. The capacity analysis would control until a threshold figure (one house per 40 acres) was reached. The developer can buy development rights or make improvements to improve the density. The developer is thus given many options that force him/her to value the costs of providing services. The rural service center growth limit or capacity approaches may be used separately, or they may be combined.

4. Planned Unit Development

Planned Unit Developments (PUDs) are areas that are planned and developed as one entity, by a single group. PUDs usually include a variety of uses such as different housing types of varying densities, open space, civic and commercial uses. In larger areas, these developments can emerge as self-sufficient communities with their own infrastructure and civic amenities. PUD standards or ordinances can be developed through public/private partnerships to ensure the construction of well-designed developments that protect existing resources and provide features that mitigate potential impacts. These developments can take place on a variety of scales but are most effective on large tracts under single ownership. Due to their scale and the level of initial private investment, PUDs offer a unique opportunity to implement a variety of planning tools including Conservation Subdivision Design, Traditional Neighborhood Design (TND) and Low Impact Design (LID).

Cluster development, Conservation Subdivision Design and Planned Unit Development offer an innovative alternative to conventional zoning and promote compact development.

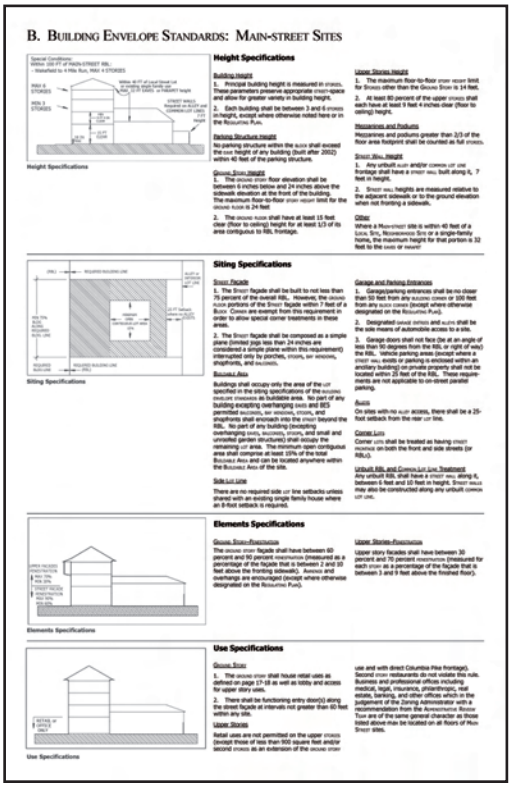
5. Inclusionary Zoning

Inclusionary Zoning is one of many tools that can help preserve workforce housing opportunities in developing communities.

Inclusionary Zoning (IZ) provides incentives to create a diversity of housing types and costs in a rural center or community, and particularly, to encourage the development of housing units affordable by households of low and moderate income. Typically, this tool requires a developer to set aside a fixed percentage of a residential proposal as "affordable to low and moderate income households". While some programs should offer developers alternatives such a fees in lieu of development or off-site construction, on-site development best develops mixed-income development. Developers may benefit from IZ through non-monetary cost off-sets such as density bonuses and fast track permitting. IZ can also be structured to provide affordable housing across a wide variety of income levels. A well-designed IZ program must include long term affordability protection. It is also critical that the enabling legislation for this technique should be clear about the obligations of the developer as well as those of the local administrative agency.

RURAL DESIGN/CHARACTER TOOLS

6. Form-Based Zoning



Form-based codes focus on the features of buildings and their relationship to the street to create well-designed walkable communities.

While traditional zoning focuses on the use of the land and standard dimensional controls (setbacks, etc.), form-based zoning places more emphasis on the design of development. Form-based codes can focus both on individual building types as well as neighborhood features and the relationship of buildings to roads and sidewalks. These codes go further than overlay zoning by actually integrating specific design considerations in land use regulations. Design aspects are generally provided in a palette of imagery within the actual code or as part of a referenced guidance piece known as a "pattern book". Using imagery in this manner is a uniquely effective way to communicate to developers how a community's sense of place will be fostered through design and materials. Aspects of design typically addressed in form based codes include height, massing, scale, vistas, parking, streetscape, signs and the relationship between these elements.

7. Site Plan Review

The impact on natural resources and the existing character of the surrounding neighborhoods are issues frequently raised by communities confronted with new development. As a direct response, the impacts of new development can be minimized through careful site design and analysis. Site Plan Review is an administrative process that recognizes that certain developments of land are, because of their nature, size, complexity or other reasons of probable impact, capable of adversely affecting the ecological, cultural or historic impacts to the property unless careful consideration is given to certain critical design elements and performance standards. Typical development and performance standards focus on five main topical areas: environmental impacts, engineering issues (specifically grading, stormwater, and utilities), habitat changes and landscape impacts, traffic, parking and circulation, and overall context and community impacts. Plans are reviewed by an interagency and or interdisciplinary group against a submission checklist for general completeness and for suitability with regard to the performance standards. Administrative Elements that can streamline the Site Plan Review process include pre-application conferences with the applicant, mandatory comment format from committee members and

8. Cluster Zoning/Conservation Subdivision Design

The terms cluster zoning and conservation subdivision are often used interchangeably as they both refer to alternative approaches to regulating the subdivision process. In contrast to traditional land subdivision regulations where most of the land is substantially altered or paved, cluster zoning and conservation subdivision design promote protection of working lands and open space preservation based on environmental and social priorities. These techniques feature partnership in development design between municipal officials and developers, which provide innovative flexible incentives for clustering density and minimal disturbance to the natural terrain. The most effective way to implement these techniques is to require a detailed assessment of a site's natural and cultural resources before the site design begins. These resources are then preserved through flexible alignments of buildings, lots and roads. A well designed ordinance will: (1) create contiguous open space with adjoining lands, (2) have a plan for open space or working land management, and (3) be as attractive to a developer as the conventional subdivision process.

Conservation easements can be integrated into development agreements or purchased by non-profit organizations to ensure the long-term health of natural systems.

Preserved areas are generally held in perpetuity through the use of easements. Communities using Conservation Design will need to carefully consider appropriate uses for the preserved area. Uses to consider are conservation only, utilities (stormwater, wastewater wind power, etc.), or leasing areas for farmland. please add: reference to leasing protected land for farming, and to be effective open space should be:

9. Growth Boundaries/Service Boundaries

Clear boundaries between rural, urban and large-scale agriculture help to define communities and prevent sprawl.

A Rural Village Center typically defines the center of a rural community and is comprised of a cohesive core of residential, civic, institutional, and commercial buildings. Buildings are "human-scale" and arranged along a main street and where applicable, public green space. Development is generally more compact and arranged is a way that facilitates access to a range of commercial and civic uses designed to provide for everyday needs. Higher density housing is integrated into the village center, often above commercial uses and public transportation options provide residents with alternative means of transport to and from their neighborhood.

A growth or service boundary can be delineated for an existing rural center or village or a new one to designate areas where higher intensity development is appropriate and outside of which rural working lands and conservation lands should be maintained. These boundaries are often linked to infrastructure planning and delineate the outward extent of utilities such as centralized sewer or water supply networks. These boundaries can be used to leverage more sophisticated planning techniques such as Performance Based Zoning or Transfer of Development Rights. Instituting a growth or service boundary should follow a careful consideration of the social, environmental and economic impacts that will result from the eventual build-out of a rural town or village core and the potential preservation of wide tracts of open space. Village Center Zoning or Overlay Districts can be used to complement service boundaries by adding design guidelines and flexibility in areas intended for higher density.

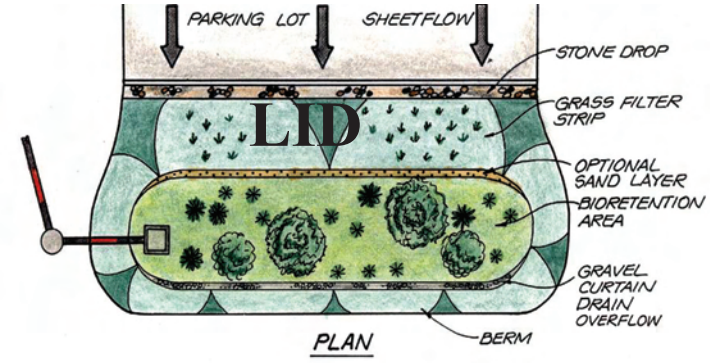
RURAL INFRASTRUCTURE & SERVICE LEVEL TOOLS

10. Health, Highway and Subdivision Regulations

Local regulations have evolved in a manner that often encourages unnecessary fiscal impacts, creates significant environmental damage and significantly increases the cost of development. Standards for roadways and utilities, particularly in rural areas, often require a much higher impact design than what is necessary. Road widths, curb specifications, curve radii, wastewater techniques and stormwater management design are all examples of areas within these regulations that should be closely examined in rural settings. These standards can create unnecessary expanses of impervious cover that are managed by insufficient subsurface drainage systems. Subdivision standards not only result in environmental damage, but can significantly erode the community character in a rural setting in a brief period of time.

11. Low Impact Development Techniques

Low Impact Development (LID) strategies encourage a significant reduction in the land disturbance associated with development. Coupled with innovative stormwater and wastewater management techniques, this approach to site development seeks to replicate the hydrologic conditions of a site as they were in natural conditions. Simple changes to the local land use regulations can allow developers and property owners to implement LID techniques such as rain gardens, swales and neighborhood scale wastewater disposal systems. LID techniques work best with other innovative land use regulations such as Conservation Subdivision Design and Planned Unit Development projects where lot size, shape and building placement can better respond to local land use patterns and the physical conditions at the site. In rural, low density areas, consideration should be made to establish limits on impervious lot coverage as well as lawn coverage and tree removal. Road and driveway width should be minimized and pervious material should be encouraged for single family driveways.



Innovative stormwater techniques can lower development and maintenance costs while creating significant environmental benefit.

12. Rural Service Level Standards

The level of services provided to rural areas outside of village centers can be lower than those provided within the village. The key is to provide clear information to new rural residents so they know the support they can expect from county government. Rural counties in the western US mainland have adopted a "Code of the West" describing to residents what the county will provide, and, more importantly, what they will not provide. Two examples are Larimar County, Colorado and Chelan County, Washington. They have adopted codes that provides specific descriptions of the services provided to warn new residents that, if they build in rural areas, they should expect to be more self sufficient than if they live in a village center.

Hawaii Counties can adopt a similar code and provide specific standards for remote rural areas including details on:

- Road construction and access issues;
- Support during emergencies or natural disasters;
- Limits on where school buses will travel;
- Warnings that development may occur on neighboring lands
- Limitations on the level of utilities provided, including permitting requirements for private wells and septic system, and;
- Issues on conflicts between rural development and agricultural operations.

13. Historic and Archaeological Preservation

Historic features in the landscape speak to the spirit and history of a place and should be preserved wherever possible.

Identifying important historical or archaeological features within a community is an essential planning exercise if cultural values are to remain integrated into the physical landscape. Once features are identified, communities can employ a myriad of incentive-based regulatory techniques such a Transfer Development Rights (TDR), Conservation Subdivision Design (CSD), or Overlay Districts that encourage long term protection of these resources in the development review process. In constrast to these incentive-based approaches, many communities also adopt a Local Historic Districts overlays which protect historically significant resources by regulating changes to historic structures or features. Non-regulatory techniques such as Purchase of Devleopment Rights, Use Easements and Conservation Restrictions could also be used to secure public ownership or access to these resources or offer protection through deed restrictions which limit future development or subdivision of these resource areas.

14. Preserving Public Access

Encouraging deeded public access to conservation areas, trails, parks, or coastal areas is best achieved by employing a multifaceted approach. Various regulatory techniques such as Conservation Subdivision Design (CSD), Transfer of Development Rights, Form-Based Zoning Districts or Overlays can be used within the development review process to secure long term public access between recreational or conservation areas. However, in order to minimize land use conflicts and permitting delays it is also imperative that communities comprehensively study and map these public conservation areas and identify appropriate greenway corridors in advance of reviewing formal development plans. As a supplement to these regulatory tools, this integrated approach will also prove essential to local decision-makers when evaluating non-regulatory techniques such as Purchase of Devleopment Rights, Use Easements and Conservation Restrictions.

15. Deed Restrictions

In general terms, deed restrictions are clauses within a deed (the method of transferring title to real estate), limiting the future uses or the conditions of transfer of the property. Deed restrictions "run" with the land, so future owners are required to comply with the restrictions upon purchase of the land. Deed restrictions are an effective means to ensure the protection of valuable resources and are often an integral component of Transfer of Development Rights, Purchase of Development Rights, Conservation Subdivision Design, and Inclusionary Zoning. Areas that implement Right-to-Farm bylaws have also developed deed riders that preclude home owners from filing nuisance complaints against agricultural operations for typical activities.

16. Special Property Tax Assessments

To help preserve specific "low impact" land uses in the face of increasing market demands, communities around the country use special tax assessments to provide property owners with an incentive to maintain a current use. These assessments are often applied to agricultural lands, forest areas, or for recreational lands that are zoned for "higher value" uses such as residential use. Under these tax-based programs, owners of these lands apply for reduced assessments based on the current use of their land as opposed to potential future use. These tax assessments continue at this rate as long as the property remains in its current use. Programs typically feature recapture clauses where the difference in back taxes are due if dedication is terminated early and can provide counties with the right to make an offer when a property goes on the market. Programs can also be constructed to allow local agencies the right to offer to purchase the land should the owner decide to eventually sell his or her property. This provision ensures that local governments will have the opportunity to permanently preserve the land.

17. Agricultural/Conservation Easements

Agricultural or conservation easements are placed on tracts of privately owned land to specify where these activities are the sole allowable use. These easements are often sold or donated to public or non-profit agencies who serve as stewards of the easement. The land owner retains ownership and management of the land, and the entity receiving the easement is bound by a legally binding restriction upon the land, which does not affect the rights to sell or pass along the land. An agricultural easement may allow farming, grazing, and nursery activities, as well as construction of new farm buildings and housing for farm employees and family members. A conservation easement is similar in that it typically limits the development and subdivision of property. Private landowners can be encouraged to sell or donate agricultural/conservation easements to a government agency or private conservation organization. In return, the owner receives payment equivalent to the difference between the use value and its market value (use value meaning the value of the land as restricted, and market value meaning the value of the land for its "highest and best use," generally residential or commercial development). Land owners can also receive significant tax relief on both their estate and income from the federal government depending on the value of the easement.

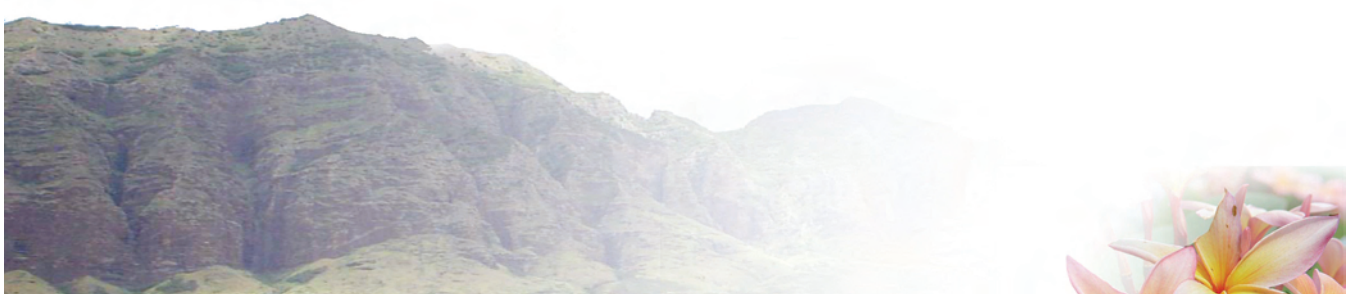
18. Transfer of Development Rights

Transfer of Development Rights (TDR) refers to a method for protecting land by transferring the "rights to develop" land in one area to another area. TDR represents an innovative way to direct growth away from lands that should be preserved (sending areas) to areas well suited to higher density development (receiving areas). Areas that may be suited to higher density development include pre-existing village centers or urban centers? that have adequate infrastructure to service larger amounts of development. TDR is often used for agricultural and/or open space protection, although it can be used to protect any important resource (e.g., aquifers, watersheds to sensitive embayments, etc.). The administration of TDR programs is typically done through either the establishment of overlay districts, where specific districts are designated as "sending" or "receiving" areas, or by identifying sending and receiving areas in a zoning ordinance. TDR is a complex planning tool that requires a careful consideration of appropriate sending and receiving areas, a detailed examination of how development rights should be valued, and potentially the creation of a TDR bank where development rights can be stored for future development.

Transferring and/or purchasing development rights can help to preserve natural or agricultural areas while protecting property investment in these areas.

19. Purchase of Development Rights

Purchase of Development Rights (PDR) allows owners to sell the rights to develop their properties (versus transfer), while retaining their property ownership. Typically, after development rights are purchased, a conservation easement (described below) is placed on the land, limiting its future use for agriculture, open space and prohibiting development. Often times, land trusts and local governments purchase development rights through this method, and dedicate the land through conservation easements, protecting it as open space or for agricultural use or conservation purposes.



20. Right to Farm Ordinance

State level legislation in many areas of the country enables local jurisdictions to adopt Right to Farm ordinances. These ordinances establish a community as one that places a unique importance on agricultural activities. As a result of adopting the ordinance, Right to Farm communities afford certain protections to farmers in case of routine land use conflicts such as noise or odor. These nuisance complaints or kept from litigation and run through a non-punitive hearing process by which consensus can be reached between all parties. Right to farm community residents are generally informed of a community's status upon their purchase of property.

21. Agricultural Commissions

Agricultural Commissions are generally formed by passing a local ordinance and serve as advocates for local farms. These commissions are being created in many areas of the country in an attempt to balance growth and quality of life issues in rural communities. Responsibilities can include protecting farmland, providing assistance for natural resource management, affording visibility to local farmers, and assisting local boards with community development decisions. Agricultural Commissions can serve as mediating agents between local farmers and residents and also as liaisons between farmers and larger state ad federal agencies that may be able to provide technical or financial support.

22. Farm Viability Enhancement Programs

The purpose of a Farm Viability Enhancement Program (FVEP) is to improve the economic bottom line and environmental integrity of participating farms through the development and implementation of Farm Viability Plans. These comprehensive, yet focused farm plans, which are developed by teams comprised of farmers and other agricultural, economic and environmental professionals, suggest ways for farmers to increase their on-farm income through improved management practices, diversification, direct marketing, value-added initiatives and agritourism. In addition, Farm Viability Plans make recommendations concerning environmental and resource conservation concerns on participating farms.

Rural Planning Matrix

PLANNING TECHNIQUES	PLANNING PRINCIPLES										
	Rural Preservation and Development	Cultural and Historical Values	Natural Systems	Compact Development	Rural Character and Form	Separate Lands	Rural Infrastructure Standards	Rural Service Levels	Maintain Working Landscapes	Rural Industry	Variety of Tools
Zoning Options	X	X	X	X	X	X			X	X	X
Exclusive Agricultural Zoning	X	X				X			X	X	X
Performance Zoning	X	X		X	X		X				X
Planned Unit Development	X	X	X	X	X	X	X	X	X	X	X
Inclusionary Zoning					X					X	X
Form-Based Zoning	X	X		X	X						X
Site Plan Review	X	X	X	X	X	X	X	X	X	X	X
Conservation Subdivision Design	X	X	X	X	X				X		X
Growth or Service Boundaries	X	X	X	X	X	X	X	X	X	X	X
Subdivision Regulations	X	X	X	X	X		X	X	X		X
Low Impact Development	X	X	X	X	X	X	X		X		X
Rural Services Levels Standards	X		X	X	X		X	X	X		X
Historic Preservation	X	X									X
Public Access	X	X	X		X				X		X
Deed Restrictions	X	X	X	X	X	X			X		X
Special Tax Assessments	X	X	X		X	X			X	X	X
Agriculture/ Conservation Easements	X	X	X	X	X	X			X	X	X
Transfer of Development Rights	X	X	X	X	X	X			X	X	X
Purchase of Development Rights	X	X	X	X	X	X			X	X	X
Agricultural Protection Ordinance	X	X			X	X				X	X
Agriculture/ Commissions	X	X			X	X			X	X	X
Farm Viability Enhancement Programs	X	X				X			X	X	X

Biographies

Ton Dinell

Dinell is Emeritus Professor of Urban and Regional Planning at the University of Hawaii at Manoa. He is the founder of the Department, where he currently teaches an introductory planning course. He is also a planning consultant, working currently with E Noa Corporation and the State of Hawaii Office of Planning. He is a member of the College of Fellows of the American Institute of Certified Planners (FAICP).

Currently Dinell is a member of the American Planning Association, Hawaii Chapter, co-chairing its Ad Hoc Committee of Land Use Reform, the Urban Land Institute District Council, chairing its Program Committee, the Oahu Metropolitan Planning Organization's Citizen Advisory Committee, and the Planning Committee of the Waikiki Improvement Association. He is an active member of Sacred Heart Parish.

Dinell retired from Catholic Charities in October 1995, after seven years as Diocesan Director. He played a key role in building Catholic Charities into one of Hawaii's largest, most diverse and most effective non-profit, human service agencies. Dinell has been a trustee of Catholic Charities USA and a member of its Social Policy Committee. He was principal writer of the Catholic Charities USA policy paper, Transforming the Welfare System (1993).

Dinell taught full-time at the University of Hawaii before taking over the helm at Catholic Charities in 1988. He was the first chair of the Urban and Regional Planning Department, serving in that position for many years. While at the University, he also served as: (1) Director of the Program on Conflict Resolution (funded principally by the Hewlett Foundation), (2) Principal Investigator for the Coastal Zone Project (funded by the Hawaii State Department of Planning and Economic Development and U.S. Department of Commerce), (3) Director of Community Interaction for the Hawaii Environmental Simulation Laboratory (funded by the Ford Foundation and the National Science Foundation), and (4) Director of the Model Cities Resident Research and Planning Centers (funded by the City and County of Honolulu and the U.S. Department of Housing and Urban Development).

Among his writings are: Pursuing the American Dream: The Paradox of Working Poor; Living in Waikiki: a Report on Interviews with 48 Waikiki Resident; "Planning in Hawaii: 1959 to 1995 - A Breathtaking Journey;" Transforming the Welfare System; and Participation: the Impossible Dream.

Dinell received his Master of Public Administration degree from the University of Michigan (1950). He was granted the Bachelor of Arts degree by Brown University where he majored in political science, graduating magna cum laude. He is a member of Phi Beta Kappa. He also attended the Graduate School of Public Administration (now the Kennedy School) at Harvard University (1965-66) as a National Institute of Public Affairs Fellow.

He is married and the father of eight adult children.

Nick Cracknell

Nicholas Cracknell is a senior land use planner at the Horsley Witten Group. Nick has over ten years of professional experience in land use planning and has served as a municipal planner and planning director in several small coastal village communities in Eastern Massachusetts.

As a municipal planner, Nick has actively promoted and implemented many smart growth land use ordinances such as a transfer development rights program, open space residential developments and a number of innovative village overlay districts. Nick has also assertively coordinated rural protection strategies through partnerships with local, regional and national land trusts such as the Trust for Public Land to secure local, state and federal funding for permanent protection of over 500 acres of active and passive open space. As Planning Director for the City of Newburyport he also provided guidance to other small urban villages through the Essex County Forum for Smart Growth, the Congress for New Urbanism and the New England Chapter of the American Planning Association.

Nick holds a Master's of Regional Planning from the University of Massachusetts in Amherst Massachusetts, and a Bachelor's of Arts in Political Science from Carleton University in Ottawa, Canada.

Mark Nelson

Mark Nelson, P.G. is a Principal with the Horsley Witten Group with twenty years of experience in water resource planning, wastewater planning and low impact development techniques. He has worked with rural and native communities across the country in developing water resource protection and wastewater facilities plans. He has also been an instructor for the US Environmental Protection Agency on local opportunities for watershed planning and water resource protection, focusing on regulatory and non-regulatory techniques that can be adopted at the town or county level.

Laura Thielen

Laura Thielen is the Director of the State Office of Planning, having been appointed to the position in 2005. The Office of Planning is charged with providing statewide strategic and policy planning, coordination between government agencies and facilitate implementation of state policies and goals.

Laura is trained as an attorney, and practiced law on the mainland with an early focus on litigation and environmental law. In 1990, she returned to Hawaii where she was raised, and pursued an environmental, land use, and administrative practice representing both small developer/landowners and community groups in plaintiff and defense actions. Laura left private practice to become a Managing Attorney at the Legal Aid Society for almost three years. She ran her own consulting business for twelve years working with non-pro.ts and state agencies. In 2000, Laura returned to school to obtain her Masters in Public Policy. She ran for and was elected to the Hawaii State Board of Education in 2002. Laura currently lives in Kailua with her husband and two daughters.

Notes

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