

[BETA TWO]

FUNDAMENTAL REALITIES

A Draft summary of what COMMUNITY FUTURE FORUM participants learned during Session One and Two and from suggested reading about the Fundamental Realities that will shape the future of Greater Warrenton Fauquier.

COMMUNITY FUTURE FORUM is comprised of five sessions. Sessions One and Two focus on understanding the context of, and the parameters that control, strategies to evolve a functional and sustainable economic, social and physical trajectory for the citizens of the Greater Warrenton-Fauquier Community.

EXECUTIVE SUMMARY

Part One provides a summary of the Fundamental Realities related to human settlement patterns and Mobility and Access that apply to the Greater Warrenton-Fauquier Beta Community.

Part Two outlines the context for evolving strategies to create resilient and sustainable, Balanced (Complete) Communities outside The Logical Location of The Clear Edge around the Cores of prosperous New Urban Regions. Greater Warrenton-Fauquier is a prototype that has a strong possibility to succeed if citizens unite to implement strategies to create a Balanced, Complete Community.

Part Three provides resources and references to document the SubRegional, Regional and MegaRegional Realities outlined in Part One.

Part Four is a brief summary of the global economic context about which the citizens of Greater Warrenton-Fauquier need to be aware.

PART ONE – SUMMARY OF FUNDAMENTAL REALITIES

The Realities outlined in Part One are primarily Regional and MegaRegional in scope. These Realities will have a profound impact on every Community in the North East US MegaRegion. They will shape the Communities both Inside and Outside the Logical Location of The Clear Edge around the Core of the National Capital SubRegion.

Because of the specific geographic location of Greater Warrenton-Fauquier within the National Capital SubRegion and within the Washington-Baltimore New Urban Region, these Realities will have a profound impact on this Beta Community for the reasons spelled out in THREE UNFOUNDED ASSUMPTIONS.

These Realities will determine the shape of the future of Greater Warrenton-Fauquier and the economic prosperity, social stability and physical sustainability of the Community's citizens and Organizations.

I. HUMAN SETTLEMENT PATTERNS

A. The Location of Urban Jobs in the National Capital SubRegion

The primary macro-determinant of Urban settlement patterns is the location of Urban Jobs.

About 96 percent of employed US citizens hold Urban Jobs. About 80 percent of all US citizens live in Metropolitan Statistical Areas (MSAs) according to the Bureau of Census. About 85 percent of all Jobs are located in MSAs. New Urban Regions contain somewhat higher percentages of both Jobs and residents. This is because New Urban Regions (NURs) are larger than MSAs. NURs that have been mapped to date approximate Consolidated Metropolitan Statistical Areas (CMSAs) but include 'fringe' jurisdictions that are, for political reasons, not counted in MSAs or CMSAs.

Urban Jobs in the National Capital SubRegion are:

- ◆ Center-weighted now
- ◆ Have been predicted to be center-weighted for the past 60 years, and
- ◆ Will be far MORE center-weighted in the future than was predicated before The Great Recession.

See SYNERGY graphics based on Wash COG Activity Centers and Job projections from 1980 to 2040 and on *WaPo* Job Location mapping presented in Session Two. An earlier version of these graphics can be found at www.betterregion.org.

B. Housing Demand – Location, Size and Type

For the past 50 years in the National Capital SubRegion, in the Washington-Baltimore New Urban Region and in every large Region in the United States:

- ◆ Agency policies, subsidies and regulations,
- ◆ Development Enterprise incentives, and
- ◆ Citizen / Household (aka, ‘the market’) misconceptions / ignorance

Have resulted in building the Wrong Size House in the Wrong Locations.

See Part Three, R & R One. [Part Three of this Perspective contains four Reference and Resource (R & R) sections to refresh participant’s recollections and provide links to important resources on specific topics.]

C. Land Development – The Dysfunctional Infrastructure Ponzi Scheme

Inefficient, energy consumptive and untransportable settlement patterns are supported by infrastructure that has evolved pursuant to “Ponzi-scheme-like” practices at the federal, state and municipal levels.

See Part Three, R & R Two

D. Too Much Urban Land

As a result of:

- ◆ Unfounded land speculation based on irrational exuberance, greed and misconceptions generated by the 1960 Census,
- ◆ Municipal land use control systems,
- ◆ State road and highway programs,
- ◆ The design of the Interstate and Defense Highway system – as contrasted with the parameters for the InterRegional Highway System proposed in 1924 – and

- ◆ Ponzi- scheme infrastructure noted in C. above.

There has been far TOO MUCH land devoted to Urban land uses. Even more land is speculatively held for future Urban land uses. This settlement pattern is sometimes called ‘sprawl.’ What is ‘sprawl’? ‘Sprawl’ is ‘in the eyes of the beholder.’ SYNERGY, for reasons spelled out in *THE SHAPE OF THE FUTURE* and in *TRILO-G*, avoids the Core Confusing Words including ‘sprawl.’ If the settlement pattern does not function well from an economic, social or physical perspective, it is dysfunctional.

For quantification of the excess Urban land in the Virginia part of the National Capital SubRegion, See Part Three, R&R Three

- E. As a result of factors A, B, C and D there is more Urbanized land – and vastly more land held for future Urban land uses – than can EVER be supported by the market for Urban fabric.

There is now a shrinking market for Urban land uses trapped in scattered and dysfunctional settlement patterns.

In addition to the fact there is no foreseeable market for the excess Urban land in the long term, these settlement patterns are unsustainable even if heavily subsidized by Agencies to support the short term interests of some Households, Enterprises and Institutions.

Excess land devoted to and held for future Urban uses also limits the evolution of sustainable NonUrban land uses. The fact that there is excess land devoted to and held for Urban land uses prevents the evolution of functional NonUrban settlement patterns needed to restore air and water quality, stop top soil erosion, improve bio-diversity and achieve a sustainable trajectory based on science-based metrics of ecological health.

If the human ecological footprint is reduced due to the evolution to functional and sustainable Urban settlement patterns, then an ecological sound use of the land resource for NonUrban uses can be achieved.

With functional Urban settlement patterns less than 5 percent of the land area of the US would be devoted to Urban land uses. That means that over 95 percent of the land can be devoted to NonUrban land uses resulting in effective distribution of NonUrban land uses and an ecologically sound Balance of total land use can be achieved.

Removing potentially productive land from unsustainable Urban use and putting this land to use to provide food and fiber and for OpenSpace, OpenLand and other NonUrban uses will reverse the current unsustainable trajectory.

See SETTLEMENT PATTERN CONSILIENCE and Part Three, R & R Four

F. The Bottom Line:

To have resilient and sustainable civilization with happy and safe citizens there is an absolute need for fundamentally different human settlement patterns and there is an imperative to evolve Balanced (Complete) Communities.

II. MOBILITY AND ACCESS

Measures of time and resources wasted by Urban travel congestion make it very clear that the dysfunctional distribution of the origins and destination of travel demand established by the existing patterns and densities of land use are UNTRANSPORTABLE.

A. The Utility of Large Private Vehicles (aka, Automobiles – cars and trucks)

Even if settlement patterns were more compact and there was a more rational distribution of the origins and destinations fo travel demand, Large Private Vehicles are economically and physically incapable of being the primary source of Mobility and Access for Urban citizens. This is because the area needed to drive and park Large Private Vehicles DISAGGREGATES Urban settlement patterns. The space demands of Large Private Vehicles scatter and disaggregate the origins and destinations of Urban travel demand.

See SETTLEMENT PATTERN CONSILIENCE and sources cited there in, including THE PROBLEM WITH CARS – PART THREE of *TRILO-G*.

B. Large Private Vehicles that have dominated Mobility and Access strategies since 1920 have NEVER provided Mobility and Access to more than 55 percent of the population of any significant Urban agglomeration. Reliance upon Large Private Vehicles for Mobility and Access does not serve those who are too young, too old or otherwise unable to drive these Vehicles.

For this reason even if Large Private Vehicles (LPVs) were ‘inexpensive’ and fuel was ‘free,’ LPVs could not provide Mobility and Access to large Urban Agglomerations. Large Urban agglomerations (New Urban Regions) are now the primary context of human economic, social and physical activity.

See SETTLEMENT PATTERN CONSILIENCE and sources cited there in, including THE PROBLEM WITH CARS – PART THREE of *TRILO-G*.

C. The Cost of Large Private Vehicles

Due to the factors explored in Part Four, APPENDIX, the cost of Large Private Vehicles that are both safe to drive on the Interstate System and fuel efficient have been rising faster than inflation over the past 60 years. In 2012 about Fifty Percent of employed workers in the US cannot afford a Large Private Vehicle that is BOTH fuel efficient AND safe to drive on the Interstate Highway System.

See SETTLEMENT PATTERN CONSILIENCE and sources cited there in, including THE PROBLEM WITH CARS – PART THREE of *TRILO-G*.

D. Large Private Vehicle Innovation

Current ‘innovation’ in Large Private Vehicles:

- ◆ Flying cars,
- ◆ Self-driving cars, and
- ◆ Technologically advanced vehicles (aka, gadget laden cars and trucks)

Are complex, expensive and often require new or upgraded infrastructure.

In addition, the current strategies to relieve Large Private Vehicle congestion require even more land be devoted to area to drive the Vehicles and to park them near origins and destinations of travel demand when they are not in use.

Because of escalating costs inherent in their design and operation in the future, Large Private Vehicles will serve smaller and smaller percentages of the population.

See II. A, B and C. Above

E. What Comes Next?

“What Follows the Automobile?” is the subject of a forthcoming Perspective. A brief preview to the answer to this question is:

Functional human settlement patterns in which citizens can achieve:

- ◆ Access primarily by walking, self-powered vehicles and low-powered vehicles, and

- ◆ Mobility and Access primarily by low-powered vehicles and by SharedVehicle Systems.

NB: Readers may wish to look ahead to the future of Mobility and Access before WHAT FOLLOWS THE AUTONOMOBILE? is completed. They may request a copy of UNDERSTANDING THE FUTURE OF INTER-COMMUNITY, INTER-SUBREGIONAL AND INTER-REGIONAL ROADWAYS DESIGNED TO SERVE LARGE PRIVATE VEHICLES which is a Beta 1 Draft Perspective not yet published.

Part One is a draft. The nominations of additional Realities are welcome. Editing suggestions and correction of errors and typos are welcome.

If participants disagree with any of the listed Realities or the documentation of that Reality, please supply location based data to document contrary perspectives.

PART TWO – CONTEXT FOR EVOLVING STRATEGIES TO CREATE RESILIENT AND SUSTAINABLE BALANCED (COMPLETE) COMMUNITIES

I. OUTLINE OF STRATEGIES TO ACHIEVE FUNDAMENTAL TRANSFORMATIONS

- A. In a democracy, citizen education is the first requirement if there is to be support for Fundamental Transformations to reflect current Reality.
- B. Given the SubRegional, Regional and MegaRegional context outlined in Part One and the global context outlined in Part Four APPENDIX the groundwork for Fundamental Transformation must start at the Community scale.
- C. In an Urban society with a market economy, the first step to creating Balance where there are more employable citizens than there are Jobs – the case in Greater Warrenton-Fauquier – is to expand the economic Base. Three strategies to expand the economic base are:
 - ◆ Community Import Replacement
 - ◆ Community Export Enhancement
 - ◆ Community Internal Currency Optimization
- D. Within a Region, the first Community to succeed in applying the strategies in C. above acquires a head start toward becoming a Balanced, Complete Community.
- E. Within Communities that have citizens and Organizations with the ability to invest – the case in Greater Warrenton-Fauquier – creating opportunities to invest WITHIN the Community leverages the strategies outlined in C. above. This is especially true for investment in projects that enhance the functionality, resilience, Balance and Amenity (attractiveness) of the Community. This fact is very important when the nation-state strategy is to minimize interest rates to encourage forms of investment that may be counterproductive. See Part Four – APPENDIX.
- F. Representatives and citizen leaders of Organizations at the Neighborhood, Village and Community scales must work with adjacent Communities and Regional leadership to also enhance the competitive position of the SubRegion and Region.

II. NOTES ON GREATER WARRENTON – FAUQUIER RESOURCES

- A. Greater Warrenton-Fauquier has a number of important Institutional assets. Of primary importance is the Community Health System as well as Community theater, orchestra, and many other Institutions that are critical to creation of a civil society.
- B. Greater Warrenton-Fauquier is blessed with a magnificent Countryside. This is not just important as an Amenity but also provides the opportunity for access to food and fiber. The Countryside also provides an opportunity for export enhancement and for investment to leverage the change from scattered Urban land uses to functional and productive NonUrban land uses as outlined in SETTLEMENT PATTERN CONSILIENCE
- C. Greater Warrenton-Fauquier has a large percentage of older residents who are not poor. If provided with investment opportunities WITHIN the Community they could become an important economic asset.
- D. Taken together these resources create the potential for Greater Warrenton-Fauquier to become a unique and splendid place to live, work, seek Services and thrive.

III. NOTES ON GREATER WARRENTON-FAUQUIER CHALLENGES

- A. Irrational expectations based on the largess provided by the historical relationship between the Community and the Core of the National Capital SubRegion. These expectations include value of land for Urban land uses and attractiveness for citizens to ‘live here and work there.’ See THREE UNFOUNDED ASSUMPTIONS and Part One above.
- B. Dysfunctionally scattered Urban land uses in the Countryside, especially Large Single Household Dwellings that are only accessible with Large Private Vehicles. See Part One above.
- C. Failure of Cluster, Town and County Agencies to come to grips with profound changes in the economic and physical context of the Community within the SubRegion and Region when these changes were first identified.

Creation of Service District are sound strategy to evolve functional settlement patterns. However Agencies failed to size the Districts and plan for a Balance of land uses to match the Regional market. Agencies also failed to provide Services in the Service Districts.

IV. HOW TO QUANTIFY BALANCE – METRICS TO CREATE BALANCED (COMPLETE) COMMUNITIES

There is an important new resource for understanding the need for tools to determine Balance (aka, “Balance Metrics”) for Clusters, Neighborhoods, Villages, Communities, SubRegions, Regions and MegaRegions.

Here is the link to a new report that addresses the issue of Balance Metrics.

<http://www.theatlanticcities.com/jobs-and-economy/2012/10/ingredients-complete-communities/3440/>

As important as this resource is, it has flaws. The primary shortcomings are failure to embrace a comprehensive Conceptual Framework for analysis of the economic, social and physical parameters of large Urban agglomerations and the companion failure to use a consistent Vocabulary to articulate that Conceptual Framework.

Note the use of ‘neighborhood,’ ‘community’ and ‘region.’ Are ‘Complete Communities’ only achieved at the ‘Regional’ scale? Can there be several, or many, ‘Complete Communities’ in a single ‘Region’? What scale is a ‘neighborhood’? Can a ‘neighborhood’ become a Complete Community? See discussion in Part Three – R & R Three of Vocabulary concerning Walk UPS.

One way to understand the importance of these issues is to review the discussion of the ‘Four Tragic Flaws’ in a review of another important recent publication *Green Metropolis: Why Living Smaller, Living Closer, and Driving Less Are the Keys to Sustainability* by David Owen in GREEN METROPOLIS – THE TRIUMPH OF NEW URBAN REGIONS AND NOT THE TRIUMPH OF ‘CITIES.’ Current Perspective # 17 linked from the *CURRENT PERSPECTIVES* page at www.emrisse.com

It will be imperative to develop a set of Balance Metrics for Clusters, Neighborhoods, Villages within Greater Warrenton-Fauquier and for the Community as-a-whole if it is to become a Balanced, Complete Community.

Part Two is a draft that will be revised and expanded. The nomination of additional Resources, Challenges, Metrics and parameters for achieving a resilient and sustainable Balanced and Complete Community are welcomed. Editing suggestions and correction of errors and typos are welcome.

PART THREE – REFERENCES & RESOURCES THAT DOCUMENT FUNDAMENTAL REALITIES

I. R & R ONE – HOUSEHOLD FORMATION

It has been documented by the National Association of Realtors, The Urban Land Institute and others that the two largest population cohorts that will form Households over the next 20 years say they do not want (and they are not buying) Large Single Household Dwellings that are remote from J / S / R / A.

For a recent confirmation of the market behind this fact see:

<http://www.theatlanticcities.com/jobs-and-economy/2012/09/next-major-real-estate-cycle-walkable-urbanism/3161/>

This article was recommended in Vol I, Num 3.

No one argues that, based on current demographic projections (i.e. without MASSIVE new immigration or radical change in fertility rates), there will not be enough future Households with young children to buy or rent the Large Single Family Dwellings THAT NOW EXIST.

This is true EVEN IF THESE HOUSEHOLDS COULD AFFORD a Large Private Vehicle to access these Units. See Part One.

Those who have read the CFF background materials know there are, based on current population data, about 25 Million EXCESS Large Single Family Detached Dwellings in the US. This is a result of building the Wrong Size House in the Wrong Location over the past 30 years.

Compounding the need to address this problem at the Community scale is a lingering misconception that:

In spite of these facts when a young Urban (and urbane) couple starts to raise children they will be willing to move to a Large Single Household Detached Dwelling even if that dwelling that is NOT in a Balanced (Complete) Community.

Here is an antidote for that misconception. “Families WILL Choose to Live Downtown, If We Design for Kids.”

<http://www.planetizen.com/node/58567>

Please be careful in interpreting the Vocabulary in this perspective. Toderian is a well respected Canadian. His Vocabulary is not quite the same as might be expected from someone in this Region. He uses ‘city’ more like some would use ‘region.’ This is because of the reformation of

municipal Agencies in Canada over the past 40 years. In the text, Toderian distinguishes between ‘CBD’ and the word ‘Downtown’ used in the title. Toderian’s use of ‘downtown’ would include most of the Urban fabric inside The Logical Location of The Clear Edge around the Cored of the National Capital SubRegion that is not made up primarily of Single Household Detached ‘subdivisions.’

It is important to understand that all the Walk UPS in the work by Leinberger described in the *Atlantic Cities* story linked above would be ‘downtown’ in this context. However, Leinberger classifies one of the six ‘types’ of Walk UPS that he identifies as ‘downtown.’ This is an example of why evolving a functional Vocabulary is critically important.

II. R & R TWO – INFRASTRUCTURE

To understand how settlement patterns evolved to be so dysfunctional, a good place to start is with *Thoughts on Building Strong Towns, Vol 1* by Charles L. Marohn Jr.

Here is a link to a review of the book by Kaid Benfield.

http://switchboard.nrdc.org/blogs/kbenfield/a_fiscal_conservatives_manifes.html

It is fair to say that the one and a half page Introduction from which EMR quoted during Session One – and the rest of the book as well – is not well supplied with supporting documentation. However if Marohn had cited Harvey Molotch (‘the growth machine’), Chris Alexander (‘the pattern language’) and Albert Bartlett (‘the power of the exponential function’) in the Introduction he would be have provided all the confirmation needed for his overarching perspective on dysfunctional settlement patterns as a Ponzi scheme.

One can get a full Ponzi scheme explanation without buying the book by going to the Strong Towns web site cited in Vol I, Num 1. <http://www.strongtowns.org/>

There are technical, conceptual and scale shortcomings with Marohn’s ‘Ponzi-scheme-explains-it-all’ approach to the drivers of dysfunctional human settlement patterns. One example is that Marohn does not yet recognize the important research by Professor William H. Lucy of UVA. Dr. Lucy has documented in two book that older dwelling units in inner Radius Bands have regained value while those in outer Radius Bands have not even though they have new infrastructure that should under the Ponzi scheme strategy have higher values.

However, Marohn provides a very good ‘stump speech.’ The Ponzi scheme perspective is a way to get across why Loudoun County is in such deep trouble even if it has:

- ◆ The highest Median Household income of any county in the US,

- ◆ The highest percentage of new Jobs of any county in the US in 2011, and
- ◆ Not yet suffered as great a value decline of its Urban fabric as have places located farther from the Centroid of the National Capital SubRegion.

III. R & R THREE – FAR TOO MUCH LAND DEVOTED TO URBAN LAND USES

There is TOO MUCH LAND devoted to and held for urban land uses in The Washington-Baltimore New Urban Region and in every New Urban Region in the United States. These Regions are now where 80 percent of the citizens live and where 85 percent of the Jobs are located.

See *THE SHAPE OF THE FUTURE*

A THREE FOLD DECREASE in the Urban land required to achieve functional and sustainable settlement patterns transformation is noted in THREE UNFOUNDED ASSUMPTIONS and is documented in SETTLEMENT PATTERN CONSILIENCE, Current Perspective # 26 linked from the CURRENT PERSPECTIVES page at www.emrisse.com.

In a recent draft Perspective on the future of roadways designed to serve Large Private Vehicles SYNERGY noted the impact of the shift of the Sweet Spot on the Cost of Services Curve from 10 pn. ac. to 30 pn. ac. this way:

There has been a Fundamental Transformation of the driving forces that establish settlement patterns in the Core of New Urban Regions and their SubRegions.

For example in the National Capital SubRegion:

- ◆ New settlement patterns are emerging in the Zentrum [See the data from Leinberger in WALK UP cited in R & R One and is cited again below.]
- ◆ New settlement patterns will also emerge on the millions of acres inside The Logical Location of The Clear Edge (LL / CE) around the Core of the National Capital SubRegion that are no longer needed for Urban land uses. [See SETTLEMENT PATTERN CONSILIENCE]

Here is a brief illustration of the impact of the shift fo the Sweet Spot from 10 to 30 on the Cost of Services Curve.

There are about 2,000,000 acres in the Core of the National Capital SubRegion. There are about 600,000 of these acres in Virginia.

With half of the Virginia part of Core of the National Capital SubRegion devoted to OpenSpace and OpenLand and the other half occupied by Alpha Communities with densities at the New Sweet Spot on the Cost of Services Curve there is a holding capacity for 9 million citizens with a Balance of J / H / S / R / A. There are now less than one third that many citizens in this area.

The new holding capacity is enough to accommodate the population of the Chicago MSA in the Virginia part of the SubRegion and still have almost 50 percent OpenSpace. It would alternatively hold the population of ALL of the Atlanta MSA AND the Boston MSA or it would hold the population of the San Francisco MSA and Miami MSA. It would hold the entire Tampa MSA plus the St. Louis MSA and the San Diego MSA.

Here is a another way to understand the importance of the Shift of the Sweet Spot on the Cost of Services Curve. In Vol I, Num 3 there was a discussion of Emily Badgers article in *The Atlantic Cities* concerning a ULI conference at GWU on 11 September. The story includes an important graphic but it lacks Radial Location data.

<http://www.theatlanticcities.com/jobs-and-economy/2012/09/next-major-real-estate-cycle-walkable-urbanism/3161/>

Here is a primer on the Radial Location of National Capital SubRegion **Walk UPS** shown on the map in the above referenced story:

The Beltway is about R=10 Miles at Tysons Corner. The new Silver Line METRO stations in Reston are between R=16 Miles and R= 18 Miles. The Logical Location of The Clear Edge (LL / CE) in 2012 is between R=25 Miles and R = 32 Miles in Virginia. In other words ALL THE **Walk UPS** are FAR INSIDE the LL / CE except for Frederick, MD and Fredericksburg, VA. Greater Warrenton-Fauquier is in the R= 35 Miles to R=55 Mile Radius Band.

Over the past month *WaPo* (including the Monday *Capital Business* supplement) documents that there is now under construction enough space for J / H / S to meet the foreseeable needs in the National Capital SubRegion WITHIN the **Walk UPS** (aka, 'Activity Centers') that Leinberger identifies.

Leinberger's work provides documentation that will help citizens understand the shift of the SweetSpot on the Cost of Services Curve at the Alpha Community Scale from 10 pn ac to 30 pn ac. since 2005. This is a major change that will result in a drastic reduction in the amount of Urban land needed to support existing and projected population and economic activity in The National Capital Subregion.

The ULI / GWU conference is based on prior studies for Brookings by Chris Leinberger that are cited in Badgers article. Leinberger is also the author of material cited in the Reference Sheet for THREE UNFOUNDED ASSUMPTIONS.

The report by Leinberger on Walk UPS can be downloaded from this site:

<http://business.gwu.edu/walkup/>

This story “**WALKABLE URBANISM – the next major real estate cycle**” (Walk UPS) as well as the background that Badger cites and links supports IN SPADES the conclusions about future Regional trends found in THREE UNFOUNDED ASSUMPTIONS.

IV. R & R FOUR – UNDERSTANDING URBAN AGRARIANISM

SETTLEMENT PATTERN CONSILIENCE spells out a comprehensive, overarching strategy to use the millions of acres of land which will NEVER be occupied by economically viable Urban uses. This document documents ways to use land at and near The Logical Location of The Clear Edge (LL / CE) that are economically and environmentally sound. The economic viability of these land uses is absolutely essential to the prosperity, resilience and sustainability of Greater Warrenton-Fauquier. The strategies in SETTLEMENT PATTERN CONSILIENCE can best be grasped with an understanding of the graphics found in Duany’s badly titled 2011 / 2012 book *Garden Cities: The Theory and Practice of Agrarian Urbanism*.

Citizens need to understand the radical shift in the Sweet Spot for MINIMUM density of Alpha Communities on the Cost of Services Curve summarized in R & R Three above. Since 2006 the Sweet Spot for density at the Alpha Community scale has migrated from 10 pn. ac. – the Planned New Community density from the 60s to the 90s – to 30 pn ac. This shift is reinforced by the Leinberger’s work noted in R & R Sections I., and III. above.

The Economics of Place: The Value of Building Communities Around People (Colleen Layton, Tawny Pruitt & Kim Cekola, eds) published by the Michigan Municipal League (www.mml.org) is also an important resource in understanding Urban Agrarianism .

Part Three will be revised and expanded to reflect new resources as they become available. Suggestions for additional resources are welcome. Editing suggestions and correction of errors and typos are welcome.

PART FOUR – APPENDIX

The Realities enumerated in Part One and documented in Part Three are SubRegional, Regional and MegaRegional in scope. Citizens at the Community scale cannot change these Regional Realities but they must understand them in order to evolve economic, social and physical strategies that are resilient and sustainable.

Beyond these ‘Regional’ Realities there are ‘Global Realities.’ The citizens of Greater Warrenton-Fauquier cannot change these Realities but they can employ their existing and potential resources to protect citizens and their Organizations from these forces, at least in the near term. These Community actions can inspire others to join in a coordinated, democratic response to Global Realities at the SubRegional, Regional, MegaRegional and nation-state scale.

Agencies, Enterprises and Institutions at the Regional, MegaRegional, nation-state and multi-national / continental scales have conspired to create – or allowed to evolve by default? – a ‘global’ society. Sometimes called ‘the global village.’

While this global society has enhanced economic opportunities for some, it has placed overwhelming demand on the planet's finite resources and ecological resiliency. Many aspects of the Global Society illustrate the Fallacy of Composition:

What is good for some, is not good for all.

And as luck would have it ALL 7 billion plus humans are interdependent in many ways. About 20 percent of the planet's 7-billion humans have benefitted far more than the other 80 percent from the exploitation of the planet's Natural Capital.

‘Global reality’ has had profound impact on all scales of society. For example, no nation-state can now unilaterally control its own currency or even its own borders.

This Appendix outlines some ‘Global Realities.’ While these Realities do not directly control the near-term evolution of functional, Balanced and Complete Communities, they do establish the context for Regional Resilience and Sustainability and thus will indirectly impact the shape of all Communities in the future.

This summary of Global Realities is not intended to be ‘political.’ National surveys show that the majority of citizens believe that the Elephant Clan and Donkey Clan strategy is to blame the other Clan and avoid addressing the core problems. Both Clans hope the overarching problems will go away or that they will not have to address them until they win ‘the next election’ whenever that election may occur.

I. GLOBAL ECONOMIC AND RESOURCE REALITY

A. Current Levels of Consumption of the planet's finite resources are unsustainable.

Under current practice these rates of consumption are growing exponentially. This exponential growth is driven by larger and larger percentages of the human population expecting to enjoy the level of consumption that only the top 20 percent of the human population have enjoyed to date from the exploitation of the planets resources over the past 500 years.

See SETTLEMENT PATTERN CONSILIENCE and ENOUGH? concerning:

- ◆ Global trends in consumption,
- ◆ Expanding demand for resources by and additional 50 percent of the earth's population to achieve the quality of life now enjoyed by those at the top 20 percent of the economic Ziggurat, and
- ◆ The finite constraints of these resources.

Robert J. Gordon in his August 2012 paper "Is U. S. Economic Growth Over? Faltering Innovations Confronts the Six Headwinds." presents a new perspective on this issue. Gordon suggests – based on historic trends – that there has been an economic U TURN in the U. S. By logical extension due to a 'global economy' that means there has been / will be a U TURN in all 'developed' and 'developing' Regions, MegaRegions, nation-states and trading blocks. Gordon adds additional supporting perspectives to those outlined in ENOUGH?, Current Perspective # 18 linked from the *CURRENT PERSPECTIVES* page at www.emrisse.com.

ENOUGH? suggests that:

- ◆ Unsustainable consumption of finite Natural Capital by 20 percent of the worlds population, and
- ◆ Growing expectations of a right to their own consumption by an additional 50 percent of the planets 7-billion citizens

Will terminate the 500 year exponential expansion of Natural Capital consumption and population that has resulted in economic expansion...

OR

It will terminate the possibility of democracy and well informed markets as strategies to manage civilization.

B. The Rise of Service Costs

As Urban civilization advances across the planet the cost of mining, planting, harvesting, manufacturing, processing and distribution (production) becomes more labor efficient. At the same time the provision of Services becomes more expensive. This reality is called Baumol's Disease.

See "Why cheaper computers lead to higher tuition" by Steven Pearlstein *WaPo* 7 October 2012 for a review of *The Cost of Disease* by William J. Baumol. Pearlstein provides a summary of how the Elephant Clan and the Donkey Clan avoid addressing the inevitability of growing Service Costs. A primary driver of Service cost, especially the cost of Services provided by, or regulated by Agencies is the failure to fairly allocate the location-variable costs generated by dysfunctional settlement patterns.

C. The Current 'Solutions'

The current 'solutions' being pursued by Agencies in the US, in the EU and in other nation-states and trading blocks is to 'expand the economy' by increasing consumption that will 'raise all boats.' This strategy is physically and economically impossible for the reasons noted in Section A. above.

Specifically the current national 'strategy' to overcome The Great Recession proposed by both the Elephant Clan and the Donkey Clan is to kick start the economy by making it attractive for those with assets to invest in the stock market and in real estate. The Chairman of the Federal Reserve Board has specifically stated that the intention of the Board is to encourage investment in the stock market and in housing.

This strategy is advocated even though about 80 percent of the Households in the US do not invest in stock market. In fact a majority, for good reasons, view the stock market as a gambling venue that favors professional short term traders, money managers and others profiled in *The Age of Greed: The Triumph of Finance and the Decline of America, 1970 to the Present*. Jeff Madrick 2011.

It is also clear that the majority of the Households have lost money in housing and real estate over the past six years. The majority are unlikely to 'invest' in this asset class unless they are professional speculators. See "Not Ready for risks; Americans still saving, Low [interest] rates fail to entice investment as economic scars are slow to heal," Danielle Douglas *WaPo* 2 Oct 2012.

For a clear statement of why the 'solution' of inducing investments in which only a few MAY benefit and why the Citizen Wealth and Welfare Gulf must be closed see *The Price of Inequality: How Today's Divided Society Endangers Our Future*, Joseph Stiglitz 2012.

D. The Role of Housing and Automobiles – and of Human Settlement Patterns.

There is a second problem with the use of housing and the sale of Large Private Vehicles will not ‘expand’ the economy. It is a fact that dwelling construction and furnishing of new dwellings as well as the sale of new Large Private Vehicles has paved the path to economic ‘recovery’ (expansion) following the last seven recessions in the US. However as noted in Part One, Section I. and II that is not now possible even if it were desirable.

On the current trajectory from 50 to 80 percent of the Households will NEVER be in a position to own a functional home in a location that is close to Jobs / Services / Recreation and Amenity via Trickle Down Housing. This is primarily due to the fact that over the past 60 years Enterprises have built and Households have purchased The Wrong Size House in the Wrong Location as noted in Part One. Agency policies, programs and regulations have subsidized and exacerbated these trends.

E. The Bottom Line:

- ◆ Outside the top 20 percent of the Households, few can afford shelter that has Access to quality Jobs / Services / Recreation / Amenity
- ◆ Outside the top 50 percent of the Households few can afford a Large Private Vehicle to Access quality Jobs and Services from scattered locations.
- ◆ A growing minority cannot afford nutritious food.
- ◆ Food produced by the current industrialized food processes wastes food, land, water and resources.
- ◆ Record numbers of citizens, especially children, are below the poverty line and a growing number must rely on supplemental food assistance and homeless shelters.
- ◆ The majority cannot afford the quality of health care that is available to those at the top of the economic Ziggurat.

These are ‘global’ and ‘nation-state’ problems that some nation-states are solving for a larger percentage of their citizens than is the United States and its member states and Commonwealths.

In Greater Warrenton-Fauquier we cannot ‘solve’ these problems but we have resources and assets and there are strategies available to address these problems if a Balanced, Complete Community evolves.

IV. CONTEXT IN WHICH COMMUNITIES AND REGIONS MUST WORK

A. A Stable Democracy

A stable democracy depends on benefits of Urban society accruing to the vast majority of its citizens. The citizens of the United States desire to maintain a democracy.

Agency actions in a democracy must serve the vast majority, not just those at the top of the Ziggurat with a ‘hope’ that prosperity will trickle down. Trickle Down is the current strategy with respect to Jobs, Housing, Mobility and Access, health care and other deterrents of Quality of Life. The data from the past 40 years on the widening Citizen Wealth and Well Being Gulf documents that Trickle Down does NOT work for the vast majority of citizens.

B. A Well Informed Market.

A well informed market with knowledgeable citizens is essential to fairly allocate resources in a democracy. As Winston Churchill said of democracy, a well informed market is the worst way to allocate resources – except for all the others that have been tried to date.

C. The Foundations of Resiliency and Sustainability

Resiliency and Sustainability STARTS at the Household, Dooryard, Cluster, Neighborhood and Village scales to create Balanced (Complete) Communities.

For 200 years a core concept of appropriate scale of governance – the level of impact should be the level of control – has been neglected by kicking problem after problem up to the ‘next level’ as a ‘solution.’ State and federal level ‘solutions’ have not proven to be a viable strategy for Agency governance.

D. The national attraction (addiction) to “US exceptionalism” and entitlement to an unfair share of the planets resources by citizens of the US and their Organization must be replaced by an understanding of Global and Regional Realities and the importance of evolving Balanced, Complete Communities.

Competition is a desirable element of a well informed market to allocate resources but it must be balanced with cooperation, mutual support and equitable sharing of the planet’s resources.

Part Four will be revised and expanded to reflect new perspectives as they evolve. Suggestions for additional perspectives on Global Realities are welcome. Editing suggestions and correction of errors and typos are welcome.