

we make *home* value visible™

# Appraising High-Performing Homes

## And Why They Can Sell for More

Green Home Institute Webinar

July

19th,

2023



# Learning Objectives



1. Understand the appraisal process for high performance homes - the opportunities and challenges.
2. Discuss studies done on appraisals and what they mean for better homes.
3. Know where to go to get more information on better appraisals.

# Agenda

- 
- |                             |         |
|-----------------------------|---------|
| 1. Setting the Stage        | 10 mins |
| 2. Facilitated Conversation | 45 mins |
| 3. Putting it Together      | 5 mins  |

# Poll: Familiarity with Appraisal Process



1. **Expert.** I know how they are hired, their overall business model, the scope of their services, their methodology, and the different types of tools they have in their toolkit.
2. **Knowledgeable.** I know they are hired - for the most part - by the lenders for the buyers (or the lender offering a refinance), and are often selected by Appraisal Management Companies. And I know where appraisers fit into the timeline and overall process when a home is being refinanced or sold.
3. **Passing.** I know they are responsible for valuing things - antiques, properties, and other stuff. But I've never really thought about their businesses, day-to-day challenges, and other details.
4. **Eager learner.** Assume I know nothing - tell me more!



# Poll: Familiarity with High-Performing Homes



1. **Expert.** I design them, build them, assess them, improve them, list and market them, and/or help my buyers find them. I speak BTU, Pascal, and inches water column. R-value is my native language, as is SEER, HSPF, TESP, EF, and more! I have industry certifications AND a postgraduate degree from the school of hard knocks.
2. **Knowledgeable.** I understand and am comfortable communicating and educating my respective clientele about house-as-a-system concepts, such as the importance of how these systems impact a home's ability to deliver comfort, indoor air quality, efficient energy and water usage (and lower operational costs), durability, and more.
3. **Passing.** I know the general framework, but I am a bit uncomfortable talking about it with my clientele.  
**Eager learner.** Assume I know nothing!

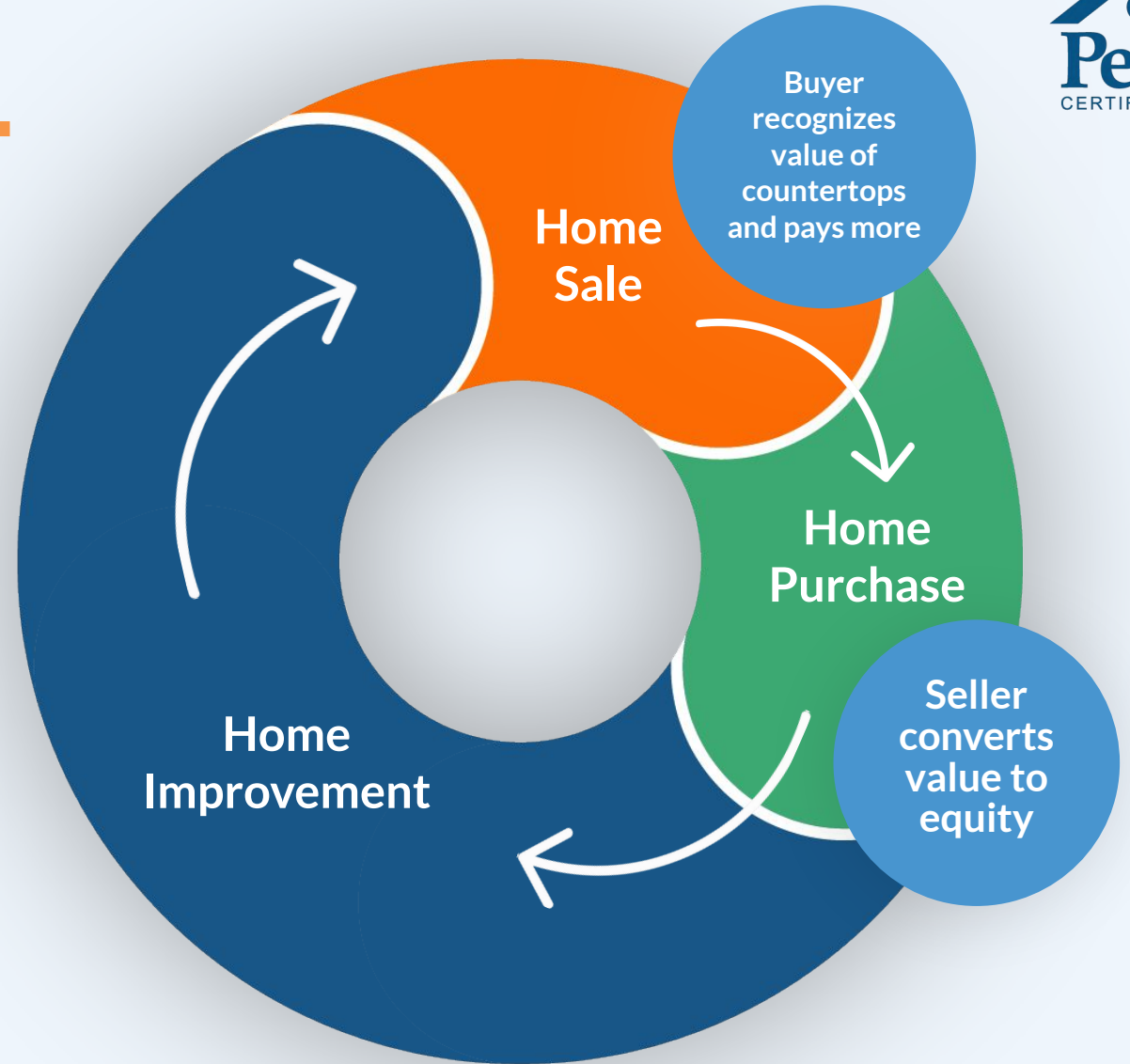


Pearl was founded to transform  
the market for high-performing  
homes.

# The Home Value Cycle



- ✓ Home **BUYER** “sees” high-performing features in Pearl’s Certification Report and marketing materials.
- ✓ Home **SELLER** captures the value of the investment in the sale price.
- ✓ **DEMAND** for High-Performing Homes drives more improvements, completing the cycle.



# Servicing All Sectors of the Industry




Pearl Certification exists in a complex ecosystem with existing standards, certifications, labels, codes, and regulations that impact the development, construction, maintenance, valuation, marketing, financing, and insuring of high-performing homes.

- Built from the ground up to apply to both new and existing homes
- A “living” certification to guide homeowners on their journey based on budget, needs, and opportunities
- Complements - not competes - with existing green programs and scores



# Appraisal Addendum - Investment Grade Documentation

	Client File #:	Appraisal File #:
	Residential Green and Energy Efficient Addendum	
	Client: Alan Machuga	
	Subject Property: 12 Pilgrim Rd	
	City: Dennis	State: Massachusetts Zip: 02638-1210
Additional resources to aid in the valuation of green properties and the completion of this form can be found at <a href="http://www.appraisalinstitute.org/education/green_energy_addendum.aspx">http://www.appraisalinstitute.org/education/green_energy_addendum.aspx</a>		
<b>The appraiser hereby certifies that the information provided within this addendum:</b> <ul style="list-style-type: none"><li>Has been considered in the appraiser's development of the appraisal of the subject property only for the client and intended user(s) identified in the appraisal report and only for the intended use stated in the report.</li><li>Is not provided by the appraiser for any other purpose and should not be relied upon by parties other than those identified by the appraiser as the client or intended user(s) in the report.</li><li>Is the result of the appraiser's routine inspection of and inquiries about the subject property's green and energy efficient features. Extraordinary assumption: Data provided herein is assumed to be accurate and if found to be in error could alter the appraiser's opinions or conclusions.</li><li>Is not made as a representation or as a warranty as to the efficiency, quality, function, operability, reliability or cost savings of the reported items or of the subject property in general, and this addendum should not be relied upon for such assessments.</li></ul>		
<b>Green Building:</b> The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's lifecycle from siting, design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classic building design concerns of economy, utility, durability, and comfort (US EPA). High Performance building and green building are often used interchangeably.		
<b>Six Elements of Green Building:</b> A green building has attributes that fall into the six elements of green building known as (1) site, (2) water, (3) energy, (4) materials, (5) indoor environmental quality, and (6) maintenance and operation. The energy and water elements are the most measurable elements of green or high performance housing. Appraisers need savings amounts to develop an income approach to support energy efficient contributory value.		
<b>THIRD-PARTY VERIFICATIONS</b> (See types defined in glossary).		
The following verified items are considered within the appraisal analysis of the subject property:		
<b>Green Certification</b> Certifications attest that the home meets certain minimum thresholds.	Environmental Protection Agency (EPA):	<input type="checkbox"/> Indoor airPLUS <input type="checkbox"/> WaterSense <input type="checkbox"/> ENERGY STAR
	Energy Department (DOE):	<input type="checkbox"/> Zero Energy Ready Home (ZERH)
	Home Innovation Research Labs NGBS Home Remodel:	<input type="checkbox"/> Bronze <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Emerald
	Home Innovation Research Labs NGBS New Home:	
	Living Building Challenge (LBC):	<input type="checkbox"/> Living Building Certified <input type="checkbox"/> Petal Certification
<b>Energy Label</b> Labels disclose the state of the home's energy assets.	Passivhaus Standard:	<input type="checkbox"/> PHI Low Energy <input type="checkbox"/> EnerPHit <input type="checkbox"/> Passive House
	Passivhaus Institute US:	<input type="checkbox"/> PHILUS+ 2015
	USGBC LEED:	<input type="checkbox"/> Certified <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Platinum
	<b>Other: Pearl Certification</b>	
	Date Verified: 01/12/2023	Certificate of Efficiency Improvements Version: <input type="checkbox"/> Verification reviewed on site <input type="checkbox"/> Other: <a href="http://www.pearlcertification.com">www.pearlcertification.com</a>
<b>Energy Label</b> Labels disclose the state of the home's energy assets.	RESNET's HERS Rating (0 to 150): <b>-2</b>	Energy Savings includes electricity, heating & cooling. Score below 100 indicates energy costs are expected to be lower than average code-built home. HERS Index Report occupancy estimates energy cost based on number of bedrooms plus one. Only a "confirmed rating" is diagnostically tested.
	DOE's Home Energy Score (1 to 10): <b>Official Score</b>	Estimated energy savings for this home: \$ /year kWh rate dated Energy Savings includes electricity, heating & cooling. Score above five indicates energy costs are expected to be lower than average local home. Home Energy Score estimates energy cost based on state average energy rates and the home's energy features.
	Official Score	
	Unofficial Score	
	Other Energy Score: Pearl Score Range (0 to 1200): <b>1102</b>	Estimated energy savings for this home: \$ /year kWh rate dated Describe energy label system: Pearl's score is approved for use in the Department of Energy's Home Performance with ENERGY STAR program.
Date Verified: 01/12/2023	Score or Rating Version: <input type="checkbox"/> Verification reviewed on site <input type="checkbox"/> Other: <a href="http://www.homeenergyscore.gov">www.homeenergyscore.gov</a> <a href="http://www.pearlcertification.com">www.pearlcertification.com</a>	<b>ABOVE VALID ONLY IF CHECKED:</b> <input type="checkbox"/> Verification reviewed on site <input type="checkbox"/> Verification attached to this report

<b>EFFICIENCY FEATURES (Water, Energy, and Environmental. See types defined in glossary).</b>			
The following items are considered within the appraisal analysis of the subject property:			
<b>Insulation</b>	<input type="checkbox"/> Fiberglass Blown-in <input checked="" type="checkbox"/> Foam Insulation <input type="checkbox"/> Cellulose <input checked="" type="checkbox"/> Fiberglass Batt Insulation <input checked="" type="checkbox"/> R-Value Wall <b>R-23</b> Ceiling <b>R-46</b> <input checked="" type="checkbox"/> Other <b>R-23</b> Conditioned basement		
<b>Building Envelope</b>	Envelope Tightness: <b>1.5</b> Unit: <input type="checkbox"/> CFM25 <input type="checkbox"/> CFM50 <input checked="" type="checkbox"/> ACH50 <input type="checkbox"/> ACH natural Instructions: Insert the rating as a number that could be 0.5 to 7ACH50 or higher. The lower the number, the more air tight the envelope. Building Codes for area show maximum Envelope Tightness allowed based on the climate zone. Not all areas have adopted a building code. <a href="http://bcap-energy.org/">http://bcap-energy.org/</a>		
<b>Windows</b>	<input checked="" type="checkbox"/> ENERGY STAR® <input checked="" type="checkbox"/> Low E <input type="checkbox"/> High Impact <input type="checkbox"/> Storm <input checked="" type="checkbox"/> Double Pane <input type="checkbox"/> Triple Pane <input type="checkbox"/> Tinted <input type="checkbox"/> Solar Shades		
<b>Day Lighting</b>	<input type="checkbox"/> # of Skylights: <input type="checkbox"/> # of Solar Tubes: <input type="checkbox"/> Other (Describe): % of lighting LEDs: <b>100</b>		
<b>ENERGY STAR® Appliances</b>	ENERGY STAR®: <input checked="" type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator <input checked="" type="checkbox"/> Washer/Dryer <input checked="" type="checkbox"/> Other Both Washer and Dryer are ENERGY STAR Energy Source: <input type="checkbox"/> Propane <input type="checkbox"/> Electric <input type="checkbox"/> Natural Gas <input type="checkbox"/> Other (Describe): <b>Note:</b> ENERGY STAR® appliances do not result in an ENERGY STAR® Home.		
<b>Water Heater</b>	<input checked="" type="checkbox"/> ENERGY STAR® <input type="checkbox"/> Size: <b>&gt;55</b> gallons <input type="checkbox"/> Tankless <input type="checkbox"/> Solar (next page) <input checked="" type="checkbox"/> Heat Pump <input type="checkbox"/> Coil		
<b>HVAC &amp; Related Equipment</b>	<input type="checkbox"/> High Efficiency HVAC SEER Efficiency Rating % AFUE* % *Annual Fuel-Utilization Efficiency	<input checked="" type="checkbox"/> Heat Pump Efficiency Rating: COP: <b>HSPF: 10.5</b> SEER: <b>19.5</b> EER:	Thermostat/Controllers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Programmable Thermostat? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Auxiliary Heat Source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Radiant Floor Heat? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Geothermal? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Vehicle Ready? (car charger) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Indoor Environmental Quality</b>	<input checked="" type="checkbox"/> Energy (ERV) or Heat Recovery Ventilator (HRV) <input checked="" type="checkbox"/> Other Measured Whole-House Ventilation Device (See glossary) <input type="checkbox"/> Humidity Monitoring Device installed		<input type="checkbox"/> Non-Toxic Pest Control <input type="checkbox"/> Radon System <input type="checkbox"/> Active <input type="checkbox"/> Passive
<b>Water Efficiency</b>	<input type="checkbox"/> Reclaimed Water System (Describe): <input type="checkbox"/> Greywater reuse system <input type="checkbox"/> Water Saving Fixtures		<input type="checkbox"/> Rain Barrels Used in Irrigation <input type="checkbox"/> Cistern size: gallons <input type="checkbox"/> Location of cistern:
<b>Utility Costs</b>	Annual Utility Cost: \$ /year, based on: to (full year). Includes (check all that apply): <input type="checkbox"/> Electric <input type="checkbox"/> Heating <input type="checkbox"/> Water <input type="checkbox"/> Other:		# Of Occupants:
<b>Comments</b>	The following property has a number of high-performing features as detailed in the Pearl Certification report. According to a 2017 study by Remodeling magazine, air sealing and attic insulation has the highest value-to-cost ratio of any home improvement and was the only improvement to have a ratio higher than 1.0 (i.e., the added home value was more than the cost to perform the work). With the cooperation and approval of the Appraisal Institute, Pearl Certification has an AI REPORTS® License Agreement. The Appraisal Institute makes no representations, warranties or guarantees as to, and assumes no responsibility for, the data, analysis or work product provided by the individual appraiser(s) or any other individual in the specific contents of the AI Reports®		
Completed by: W. Casey Murphy		Title: Vice-President of Quality Systems	Date: 01/12/2023
<b>The objective of this Addendum is to standardize the communication of the high performing features of residential properties. Identifying the features not found on the appraisal form provides a basis for comparable selection and analysis of the features. Builders, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers, agents, lenders, and homeowners. Complete the pages that apply to the property appraised and provide to appraiser prior to the completion of an appraisal. Provide the Addendum to the lender at the time of loan application to assist them in understanding the property type so an appraiser with sufficient knowledge of this property type will be engaged to provide an appraisal to meet secondary mortgage market guidelines.</b>			

Investment Grade Documentation - to help ensure that the home investments turn into added equity

## National Partners



## Manufacturer, Distributor, & Trade Partners



## Public-Private Partners



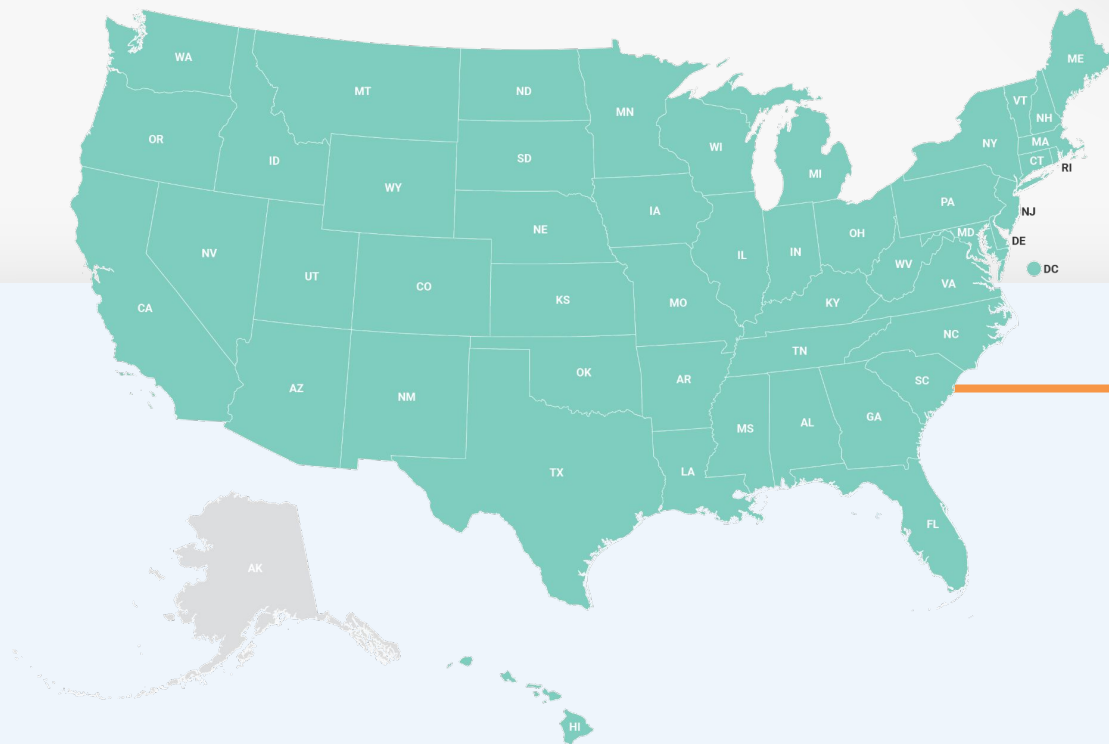
# Pearl Facilitates Access to the Market



Market-Facing Divisions to Entire Value Chain

Help programs create market transformation.

# Where are we today?



49

Active  
states

150K+

Certified  
homes



National contractor,  
builder, and real  
estate agent networks



# Pearl Helps Homeowners Increase Their Home's Equity



Pearl Certified  
homes sell on  
average for  
**5% more**

Verified by independent  
appraiser studies in  
four markets



# Challenges - Existing Homes - Agent



“I need to uninstall my solar. My agent says it will lower my home’s value”

- Homeowner contacting their solar installer

# Challenges - Existing Homes - Appraiser



“The property situated at ... would not benefit from having “green work” done on the home... When valuing “green properties” there are many contributing factors.

- Many homeowners do not buy the solar panels, they lease them. This means that since they are not owned no value can be given to this feature. Paired sales analysis is impossible to utilize even if the solar panels are owned.
- There are also other green factors that can't be valued on the report such as spray foam insulation, LED lighting, low emittance windows, on-demand heating systems, and geothermal heating systems. These are all not common and customary...they are an over improvement for this neighborhood and would not increase the value of the home.



# Challenges - Existing Homes - Appraiser (cont.)



Lastly, ... realty data does not accurately depict or explain green features in their listings and most realtors are not qualified to assess green features so data is not accurate and can not be used for paired sales analysis or market line adjustments.

All of these factors are reasons why value for green features in most areas are not taken in the appraisal report.”



# Challenges - New Homes: ZER labeled -3 HERS Index



IMPROVEMENTS	<input type="checkbox"/> Drop Stair	<input type="checkbox"/> Stairs	<input type="checkbox"/> Other	<input type="checkbox"/> Fuel	<input type="checkbox"/> Electric	<input type="checkbox"/> Fireplace(s) # 0	<input type="checkbox"/> Fence None	<input checked="" type="checkbox"/> Garage	# of Cars 2
	<input type="checkbox"/> Floor	<input checked="" type="checkbox"/> Scuttle	<input type="checkbox"/> Cooling	<input checked="" type="checkbox"/> Central Air Conditioning	<input checked="" type="checkbox"/> Patio/Deck	<input type="checkbox"/> Patio	<input type="checkbox"/> Porch None	<input type="checkbox"/> Carport	# of Cars 0
	<input type="checkbox"/> Finished	<input type="checkbox"/> Heated	<input type="checkbox"/> Individual	<input type="checkbox"/> Other	<input type="checkbox"/> Pool None	<input type="checkbox"/> Other None	<input checked="" type="checkbox"/> Att.	<input type="checkbox"/> Det.	<input type="checkbox"/> Built-in
	Appliances	<input checked="" type="checkbox"/> Refrigerator	<input checked="" type="checkbox"/> Range/Oven	<input checked="" type="checkbox"/> Dishwasher	<input checked="" type="checkbox"/> Disposal	<input checked="" type="checkbox"/> Microwave	<input type="checkbox"/> Washer/Dryer	<input type="checkbox"/> Other (describe)	
	Finished area <b>above</b> grade contains: 3 Rooms 3 Bedrooms 2.0 Bath(s) 1,774 Square Feet of Gross Living Area Above Grade Additional features (special energy efficient items, etc.) Average quality construction with typical finish and amenities. Wood flooring throughout. Granite counter tops in kitchen and master bath. No additional contributory features noted. Describe the condition of the property (including needed repairs, deterioration, renovations, remodeling, etc.): 01, No updates in the prior 15 years. The subject is approximately 95 percent complete. Appraisal subject to installation of appliances, hardware, fixtures, door casings and final completion. No inadequacies, obsolescence, or deferred maintenance noted.								

ANALYSIS	Basement & Finished					
	Rooms Below Grade					
	Functional Utility	Average	Average	Average	Average	
	Heating/Cooling	FWA/Control	FWA/Control	FWA/Control	FWA/Control	
	Energy Efficient Items	Typical System	Typical System	Typical System	Typical System	



## Woody Fincham, SRA, AI-RRS, RAA. Member of RAC

Fincham & Associates, Charlottesville, VA

Woody Fincham is a well-known and well-respected real estate appraiser in the Charlottesville, VA area. He has worked in private firms and for both municipal level assessment offices and the Virginia TAX department as a reviewer for conservation easement and historical façade easement properties. Currently, Woody specializes in complex residential properties that include mansions, equestrian hobby farms, hobby farms, resorts, waterfront and high-performance home certifications such as HERS, Pearl and LEED. His most recent position included being Residential Chief Appraiser at a national appraisal firm where he developed training, assisted in business development and assisted staff appraisers in complex problems and properties.



## Betsy Hughes, SRA, AI-RRS

**BK Appraisal Services, Virginia Beach, VA**

Betsy Hughes launched BK Appraisal Services in September 2006 after working for another appraisal firm. Prior to her time in the real estate industry, she processed home equity loans for a local Credit Union and held numerous management positions in finance for over twenty years. Betsy's extensive experience in this space has given her a deep understanding of all sides of a real estate transaction, from the borrower to the lender to the appraiser.



**Myth 1:**

**Appraisers determine a  
home's value**



**Myth 2:**

**Agents and sellers can't talk to  
appraisers**

**Myth 3:**

**No comps mean no value**

**Myth 4:**

**Solar has no value if it has a  
loan**

**An appraiser's toolset.**

**What is it?**



**Tell me an example of a  
typical challenge you have?**

**Tell me an example of a  
good appraisal process?**

**As an expert in “green,”  
what challenges do you face  
in your business?**

**As primary author of Pearl's latest study  
- and contributing author to Pearl's first  
study that was led by Sandy Admotis,  
what can you tell us?**





## Example from Appraisal Study

FEATURE	SUBJECT	COMPARABLE SALE # 4	COMPARABLE SALE # 5
Address	Subject Property Charlottesville, VA 22902	Comp Example 1 Charlottesville, VA 22902	Comp Example 2 Charlottesville, VA 22902
Proximity to Subject			
Sale Price	\$	\$ 600,550	\$ 614,468
Sale Price/Gross Liv. Area	\$ sq.ft.	\$ 237.84 sq.ft.	\$ 243.35 sq.ft.
Data Source(s)	CAAR MLS	CAAR MLS #example;DOM 0	MLs#example;DOM 0
Verification Source(s)		Assessor's Tax/Agent/Drive	Assessor's Tax/Agent/Drive
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION + (-) \$ Adjustment	DESCRIPTION + (-) \$ Adjustment
Sales or Financing	ArmLth	ArmLth	ArmLth
Concessions	Cash;0	Cash;0	Conv;5000 -5,000
Date of Sale/Time		s10/19;c01/19	s08/20;c12/19 -54,100
Location	N;Res;PynsMI	N;Res;PynsMI	N;Res;PaynesM
Leasehold/Fee Simple	Fee Simple	Fee Simple	Fee Simple
Site	8712 sf	8712 sf	13155 sf
View	N;Res;	N;Res;	N;Res;
Design (Style)	DT2;Transitnl	DT2;Colonial	DT2;Colonial
Quality of Construction	Q3	Q3	Q3
Actual Age	0	0	1
Condition	C1	C1	C1
Above Grade	Total Bdrms. Baths	Total Bdrms. Baths	Total Bdrms. Baths
Room Count	9 4 2.1	9 4 2.1	8 4 2.1
Gross Living Area	2,525 sq.ft.	2,525 sq.ft.	2,525 sq.ft.
Basement & Finished	1208sf969sfwo	1208sf969sfwo	1208sf976sfwo
Rooms Below Grade	1rr1br1.0ba0o	1rr1br1.0ba0o	1rr1br1.0ba1o
Functional Utility	Good	Good	Average
Heating/Cooling	FWA/CAC	FWA/CAC	FWA/CAC
Energy Efficient Items	Pearl Gold	Pearl Gold	None +43,000
Garage/Carport	2ga2dw	2ga2dw	2ga2dw
Porch/Patio/Deck	CvdPch,Dk	CvdPch,Dk	Cpr/Deck
Additional Items	None	None	None
Net Adjustment (Total)		<input type="checkbox"/> + <input type="checkbox"/> - \$ 0	<input type="checkbox"/> + <input checked="" type="checkbox"/> - \$ -16,100
Adjusted Sale Price		Net Adj. 0.0 %	Net Adj. 2.6 %
of Comparables		Gross Adj. 0.0 % \$ 600,550	Gross Adj. 16.6 % \$ 598,368

**If I am a builder or  
contractor, what can I do?**

**If I am an agent, what can I  
do?**

**If I am a lender, what can I  
do?**



**If I am a homeowner, what  
can I do?**

**If I am a homeowner, what  
can I do?**

**What should I do if I think I have a bad appraisal?**

**Should I request a formal reconsideration of value?**

# Putting It All Together

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Good appraisers are like good builders, good contractors, good agents.

- Their value is too often misunderstood or not recognized.
- They face competitive pressures and commoditization.
- Their industry's reputation is the same as yours. And it's threatened by bad actors.

It takes a village (or a functioning value chain).

- Appraisers can't do their job if you don't do yours.
- Understand and communicate with each other.



# Appraising High-Performing Homes

And Why They Can Sell for More



Woody Fincham



Betsy Hughes



Casey Murphy

