

# Veridian Homes LLC Annual Report



Revised 12/23/2014

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## **Executive Summary:**

Veridian Homes (VH) has been a Dane County builder for many years. Throughout those years the economic cycles have provided opportunity and challenges for the home building business.

In late 2009, a severe economic depression started that affected almost every business and individual in the United States. The home building market was one of the most challenging business sectors affected by this economic downturn. Over the next several years many builders and trades serving builders did not survive as businesses. Between 2010 and 2011 Veridian restructured our resources to meet this extreme challenge and provide a way that Veridian and its trade partners could continue to exist as businesses.

Veridian has been a long term participant in the Green Tier I Program and an original charter member in the Clear Waters Group. During the recession the Veridian Manager in charge of the environmental coordinator (EC) role was let go. Also, the individual who was being trained to take over the EC role was released from employment in the restructure. Subsequently we lost the history of the EC and the Environmental Management System, (EMS), administrative coordination and annual reporting functions were lost in this transition.

Although the EC role was unassigned, the continual improvement culture maintained at Veridian and established quality, safety and environmental procedures were enforced as part of our normal business activities. Regarding environmental objectives, Veridian's managers continued to set and achieve energy and sediment reduction goals. High rates of material reuse and recycling were maintained. Veridian continued to communicate with the WDNR through the Clear Waters Charter meetings with continuous participation and reporting.

In late 2013 Veridian began to work towards better management of the EMS program. Since then VH re-engaged the EMS to the most current procedures and operations; engaged a qualified external EMS auditor, and compiled this report to get back on track with our participation. On the "up" side of this experience we found that management support, trade cooperation and the connection we had through the Clear Water Charter has helped achieve continual improvement and meet energy, material re-use and sediment control objectives. The manner in which the Veridian Homes business culture had

imbedded the environmental ethic has sustained the environmental part of our business through these tumultuous times.

Meeting these challenges has helped to inspire and advance Veridian Homes. The broad base of support for the environmental objectives we have set has been retained throughout one of the most challenging times in Veridian Home's history.

**EMS Audit Report:** In June 2014 Veridian underwent a third-party EMS audit. The result of this audit helped to improve the VH EMS in the areas of EMS document control, procedure clarification, EMS auditing and documentation of our activities. These specific findings are listed in the attached Letter of Conformance (**EXHIBIT 1**).

**Description of Progress:**

1. Early in our Green Tier (GT) participation we established an overall objective to build homes that demonstrate energy reduction techniques (compared to the National Reference Home) as shown by Home Energy Rating System (HERS) score reductions. For the purposes of this metric we use the Focus New Homes testing, certification and reporting information. A summary report provided by our trade partner is below. (**EXHIBIT 2**) This data was verified by the Wisconsin Energy Conservation Corporation (WECC) independent of the trade partner and Veridian Homes
2. On a similarly energy-related objective we set a goal of building a new home under the new stringent Energy Star 3.0 requirements. This home was one of the first Energy Star 3.0 builds by a residential builder. Construction of this home has qualified Veridian Homes to continue as an Energy Star Builder along with our Focus on Energy certified homes. The HERS score of the home was 47; this score is 53% better than the national reference home. This data was also verified by WECC. There is a summary report regarding the energy savings and our progress toward building the Energy Star certified home below. The information and metrics were supplied by our Trade Partner. (**EXHIBIT 3**)
3. Veridian Homes also established goals to continually improve our single family residence erosion control performance. Beginning in 2008 VH proposed new materials, methods of erosion management and inspection verification techniques. Over several years these new practices were approved and have spread to other businesses that saw the need to implement erosion control. A summary report is included below (**EXHIBIT 4**) and photos of each active lot are available on a shared web site accessible to anyone (website). Each one-inch rainfall triggers an independent third-party review of 2-3 Veridian Home's neighborhoods and 30-60 lots. The erosion inspectors routinely review the photos. These photos and reports are also shared with the Clear Waters Group with public access. A summary below provided by our trade partner tells about our erosion management performance and the third-party verification process.
4. Veridian has undertaken two additional projects worth mentioning:
  - a. A donation raffle of one new energy efficient home to raise funds for the American Family Children's Hospital in Madison, WI.

- b. An annual event where our trade partners work with Veridian associates to “pick up the neighborhoods.”

**5. Sustainability Metrics:**

- a. The metrics sheet attached identifies energy savings created by our efforts in 2013. **(EXHIBIT 2)**
- b. As there are no erosion control guidelines contained in the metrics VH has devised and implemented measures to identify trends that will help Veridian Homes improve performance in both environmental and economic terms. **(EXHIBIT 4)**

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**EXHIBIT 1: EMS Audit Letter of Conformance**

*December 10, 2014*

*Mr. Dave Alberts  
Personal Builder Veridian Homes, LLC  
6801 South Towne Drive  
Madison, WI 53711*

*RE: EMS Audit 2014 Letter of Conformance*

*Dear Mr. Alberts,*

*On June 11, 2014 Perfect Environmental Performance, LLC, (PEP) performed a 3<sup>rd</sup>-year EMS audit of the Veridian Homes, LLC EMS. The audit was performed by Karissa Anderson. Veridian Homes, LLC is an organization that has voluntarily entered into a program with the Wisconsin Department of Natural Resources (Department) commonly referred to as “The Green Tier Program.” The criteria for Veridian’s participation within this program is found in Wisconsin Statute 299.83 (3) and referred to as “Eligibility for Tier I”. Perfect Environmental Performance, LLC is a third-party company with auditors identified by the Department as qualified to perform external EMS audits for Green Tier participants.*

*The focus of the Audit was to determine if Veridian’s EMS continues to conform to the “functional equivalency” criteria of the Green Tier Program. In addition to the continued functional equivalency requirement, the 3-year audits must determine if the EMS operation is producing superior environmental performance as defined in 299.83. The PEP review used the ISO 14001 (2004) Standard, the current ss. 299.83 (dg) requirements and Veridian’s defined scope of their EMS as the basis for this review.*

*A large amount of documentation, including the EMS Level 1-4 documentation, a detailed aspects and impacts table, operational controls and management meeting minutes were provided in advance. The orderly and complete nature of this information allowed the on-site review to focus on interviews and operations. Prior to the onsite review PEP also searched public documents and external communications associated with the EMS.*

*The results of the EMS audit indicate that Veridian's Environmental Management System continues to improve and conform to the "functional equivalency" requirements of ss. 299.83. The findings also confirmed that Veridian is operating the EMS in a manner that results in "superior environmental performance" as defined by the Green Tier Program (and 299.83).*

*The audit findings did note one **minor** non-conformance.*

**Finding of Minor Non-conformance (NC):**

**GT Requirement 11**

*Environmental management system audits.*

With the departure in 2012 of Veridian's primary and back-up environmental coordinators and a dramatic paradigm shift in job titles and responsibilities within Veridian the EMS's documentation was lost. The EMS itself continued to function as it was previously incorporated into the everyday business practices at Veridian. However, the documentation surrounding "how" level 2 procedures were managed and internal audits conducted was temporarily lost. After the issue was noted as non-conforming, the new EMS Coordinator was trained in late 2013 and early 2014. Internal audits could not be conducted for the time period already missed and an external audit was needed. The new documentation, now in conformance, will need to be audited internally within the 2015 calendar year.

**CLOSURE**

*In discussions with PEP during the audit, you, as the new EC for the EMS indicated Veridian would like some time to work on correcting the minor non-conformances prior to issuance of the letter of conformance.*

*Follow-up discussions from September into December 2014 led to the determination that the aforementioned minor non-conformance would take additional time and would therefore be discussed with your WDNR single-point-of-contact (SPOC) and proceed to be corrected within a time frame agreed to with the SPOC.*

This document is designed to be submitted to the Wisconsin Department of Natural Resources to verify that Veridian's EMS continues to conform to Green Tier I "functional equivalency" and "superior environmental performance" requirements. This document also verifies that your EMS has been audited by an approved third-party as required by the Green Tier I Program requirements.

If you have any questions about this documentation please feel free to contact me at 839-0129 to discuss them.

Sincerely,

PERFECT ENVIRONMENTAL PERFORMANCE, LLC



Karissa Anderson,

EMS Practice Leader; PEP Environmental Coordinator  
Green Tier Recognized Auditor [tanderson@pep-services.com](mailto:tanderson@pep-services.com)

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## **Environmental Performance**

**Objective 1: Increase energy efficiency year over year in our new home builds.**

### **EXHIBIT 2:** Performance Documentation

*Veridian Homes  
6801 South Towne Drive  
Madison, WI 53713*

*Re: Wisconsin Focus On Energy Homes 2011-2013  
Efficiency Analysis*

*Gary,  
Over the course of the last 3 years, Veridian has shown constant improvement in the efficiency of your new homes as verified by performance testing and REMRATE v14.4.1. Energy reductions relate to the amount of emissions from fuel required for these homes. High efficiency housing minimizes the environmental impact, not only for the current year, but over the life of the house.*

*The average HERS Score from 2011 was 59.4, and 2013 improved to 54. There were 208 houses certified by Focus On Energy in 2013, that resulted in a REMRATE estimated total energy savings of 521008 kWh and 69159 Therms per year.*

*Sincerely,*

*Kurtis Anderson  
Perfect Environmental Performance  
529 N. Main Street  
Cottage Grove, WI 53527*

## **Objective 2: Build one Energy Star 3.0 qualifying home in 2013**

### **Exhibit 3: Performance Documentation**

Veridian built one Energy Star 3.0 home (ES3.0) in 2013. This home was one of the first built and certified by a private home builder in Wisconsin. Below is some of the performance data about the home.

- The home scored 47 HERS. To explain this metric you need to know that a score of 100 is assigned to a similar home built to current nationwide reference standards. A national computer model takes the as-built home, including all mechanicals and appliances, and “builds it” compared to the reference home. In this case the home is 53% more energy efficient than the national reference home.
- The national model also compares the homes energy performance to Wisconsin Uniform Dwelling Code (UDC) energy requirements. In this case the home performance was 37.8% better than UDC. The average monthly energy (electric-gas) bill was calculated to be \$165 per month.
- This home had 3872 sf living space in a 3-bedroom configuration. The estimated actual energy savings were 561 therms and 3014 Kwh per year compared to the home built to UDC requirements.

#### **Conclusion:**

Veridian currently builds all homes in a range in energy efficiency from 15-30% better than UDC requirements. Veridian Homes has demonstrated ability to construct Energy Star 3.0 certified homes. Based upon years of payback for the features of the home, our existing but ever changing line of models represents the best value for most customers. Our standard specifications for home building offer very energy efficient types of builds; including solar, geothermal, demand water heating, and other energy saving enhancements for homeowners that wish to customize their home with those additional environmentally friendly features.

Like everything else in life, people have specific reasons for the way they want their home to look and perform. For customers wanting their home to include the features required to be certified as ES3.0, Veridian Homes can demonstrate experience by advising them on efficiency, durability and payback of the various features they want to consider.

Then we can build it.

**Objective 3: Participate in Clear Waters Charter Meetings and Improve Erosion Control Techniques**

**Exhibit 4:** Erosion Management Report

**Veridian Erosion Control Program-2013**

*Report to the Veridian Homes, LLC for the Clear Waters Initiative Charter/Green Tier*

*By: Perfect Environmental Performance, LLC*

***Veridian has been an active participant to the following initiatives:***

- *CWI Charter Group participation*
- *Soxx erosion control pilots*
- *Erosion control/storm water control training*
- *Voluntary photo documentation/self-inspection process w/external inspection\**

***\*2013 Summary of external 1-inch rain fall inspections***

- *There were 208 homes completed within the scope of this report in 2013.*
- *There were 14 rainfalls from January to November 2013 that triggered the 1-inch in 24 hour external inspection process.*
- *There were 8 inspections during the rain event, 5 inspections within 6 hours of the end of the event and 1 inspection within 12 hours of the end of the event.*

<i>Lots Inspected*</i>	<i>Photos</i>	<i>Non-Conformances</i>	<i>Failures</i>	
<i>406 (see note a)</i>	<i>1525</i>	<i>85 (see note b)</i>	<i>27 (see note c)</i>	

*Note a: In addition to the single family lots the inspections reviewed development areas. Some failures noted were from these areas but were attached to a nearby lot for reference for correction.*

*Note b: Each lot goes through different stages of development. The stage of development may result in a lot with 10 or more potential non-conformances. Each*

*active neighborhood is inspected 2-4 times per season depending upon the frequency of qualifying events so a lot may be inspected multiple times during construction. The 2013 non-conformance rate based upon whole lots is .209 failures per lot. Because multiple non-conformance spots have been noted on inspected lots, the actual non-conformance rate is less than 0.03 (3%) non-conformances per lot.*

*Note c: Failures are defined by the voluntary self-inspection procedure within Veridian as the failure to properly implement or maintain erosion control regardless whether it results in a release or not. Failures may also result from properly implemented erosion control that was overcome by the magnitude of the rainfall event. One lot may have several potential points of failure. The 2013 lot based erosion control failure rate is .07 failures per lot; however, taking into consideration circumstances of multiple failures per lot, the actual failure rate is less than .03 failures per lot.*

#### *Opportunity for Improvement*

*Predictably, the neighborhood with the most non-conformances and failures per lot was Middleton Ridge. The slopes and landscaping approved in the plat resulted in upslope contributions of rainwater directed downslope toward the eventual collection points. Heavy rains early in 2013 resulted in releases even though lot level erosion control was appropriately installed. Even with replacement and additional erosion control added this theme re-occurred in April-July. By converting the end of a street into a settling pond you were able to mitigate the effects of this issue for all but two short-term-high volume rainfalls. Those rainfalls released sediment into the swale. The swale vegetation and rip-rap minimized the downstream release to the settling pond collection system.*

#### *Recommendation:*

*Continual improvement in the alignment of plat and lot level control planning should continue to be emphasized. Although significant improvement has been made by Veridian to coordinate this aspect of the construction process, additional work with the planners will result in more effective erosion control that can survive through the lot level construction process. Being able to utilize existing plat level controls will make lot level control more durable and less expensive to install and maintain.*

*Since the governmental entities involved in the plat level approval process and the lot level inspection process don't have a stake in the cost and are not coordinated an effort to assist in this improvement, the effort will have to be led by Veridian. It is our opinion that plat level controls could survive lot level construction if the information known about the two activities were layered during the plat level erosion control determination.*

*Response procedures for rainfall issues*

*In 2013 every significant non-conformance or failure was discussed with or phoned to a Veridian response person directly from the lot where it was observed. In the case of Middleton Ridge the issues were discussed with the Personal Builder at the lot during the inspection process. In most cases the failure was corrected as the inspection was performed. The correction was done by the PB or PEP.*

*Corrections requiring new erosion control materials not at the site were done according to contract with the appropriate trade, usually the landscaping firm. Overall actual releases, except for the one noted at Middleton Ridge, were single events that required broom and shovel clean-ups. While some additional improvement could result from having short Soxx sections available at a location in each neighborhood, the reduction in sediment release since initialing the voluntary self-inspection program are dramatic and continual. Short Soxx sections would allow us and other trades to immediately repair small release spots.*

*The effectiveness of the control methods Veridian has put in place compared to other developers and construction businesses we have observed during the same rain events is large. Providing such a dramatic reduction in sediment load to storm water before it reaches the neighborhood storm water retention pond structures increases the life of the structure and reduces or eliminates contaminant releases from the structures for decades to come. The accomplishment speaks to the continued effectiveness of your environmental management system process for storm water management.*

*Please let us know if you have any questions about this report.  
Best Regards,*

*Tim Anderson  
General Manager, Perfect Environmental performance, LLC  
Submitted: January 20, 2013*

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## **Stakeholder Involvement**

Verdian has included specific environmental requirements within the agreements we have with our Trade Partners. We currently have over 200 Trade Partners. The feedback VH has received indicates that the environmental practices required; such as erosion minimization techniques, are used by our trades when they excavate or disturb soil at other customer sites. Our trade partners choose to do this so they have only one standard practice that meets all requirements. They often report they use the Veridian Homes standard.

In the winter 2013-2014 there was a prevailing SW wind with many of the storm events. The strong wind left a trail of debris, some from our building activities, and some from drivers throwing trash and others from roadside disposal activities, at several

neighborhoods. Veridian Homes coordinated a clean-up event at impacted neighborhoods by calling upon our Trade Partners to collaborate with us in cleaning up the scraps and materials. We had a great turn-out. The materials along roads and through fields were picked up and properly managed without regard to how the materials were released or who might have released them. The cooperation and excellent performance suggests an annual “spring celebration clean-up may be incorporated as an annual event.

Veridian also works individually with neighbors and regulators to prevent or resolve issues in our neighborhoods.

### **DNR Relationship**

For the reasons we mentioned above our Green Tier program participation needed to re-connect at some levels, particularly where our EC responsibilities were concerned.

Although we had that specific challenge our communication with our single point of contact, Dane County, City of Madison, City of Sun Prairie, and other organizations and NGO’s has been consistent since 2008 through the Clear Waters Charter meetings. Most of the innovation, collaboration and performance improvement in erosion control has been enhanced through VH participation with this group. For more information about the activities of this group please review the minutes posted by WDNR for each meeting.

### **Conclusion**

Veridian has gone through a challenging economic cycle with the rest of the country. The loss of staff left gaps in the business structure that have been recognized, re-organized and improved.

Veridian Homes cares for their customers. Regardless of the challenges, there is a constant effort to improve environmental applications and overall as a business. VH continues to build increasingly energy efficient homes through the economic crisis to benefit homeowners, communities and the environment. Veridian Homes has improved methods to reduce sediment release and maintain erosion minimization goals. VH has developed expertise to build homes to another level of Energy Star standards.

We care deeply for our community. Our home raffle provided significant resources to the American Family Children’s Hospital, as did many businesses in our community. The hospital will provide much needed care to our children regardless of economic times or individual circumstances. We feel it is a corner stone of the community in Dane County and we are proud to be associated with their mission.