



## 2013-2014 School Nominee Presentation Form

### **PART I - ELIGIBILITY CERTIFICATION**

#### **School and District's Certifications**

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.



U.S. Department of Education Green Ribbon Schools 2013-2014

[ ] Charter [ X ] Title I [ ] Magnet [ ] Private [ ] Independent

Name of Principal: Mr. Carl Marano (Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: Amy Biehl Community School (As it should appear on an award)

School Mailing Address: 310 Avenida del Sur

Santa Fe City New Mexico State 87507 Zip

County: Santa Fe State School Code Number\* 141

Telephone (505) 467-2100 Fax (505) 474-0733

Web site/URL http://www.sfps.info/index.aspx?nid=1222 E-mail: cmarano@sfps.info

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Signature of Carl Marano Date 1-28-14 (Principal's Signature)

Name of Superintendent\* Dr. Joel Boyd (Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name\* Santa Fe Public Schools Tel. (505) 467-2003

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate. This is one of the highest performing green schools in my jurisdiction.

Signature of Superintendent Date 1/28/14 (Superintendent's Signature)

\*Private Schools: If the information requested is not applicable, write N/A in the space.

PART II - SUMMARY OF ACHIEVEMENTS



## **PART II – SUMMARY OF ACHIEVEMENTS**

---

### **School Principal Summary**

The staff, students, and families of Amy Biehl Community School (ABCS) are incredibly proud, and fortunate, to have this beautiful facility as our school. It is a wonderful place to teach and learn, as well to develop a sense of environmental stewardship. Over the last three years, Santa Fe Public Schools (SFPS) has monitored and reported the energy and water use of every facility, and encouraged staff, students, and community members to get involved in conservation efforts. Because of that data sharing and support, we at ABCS are able to understand where our facility fits in the larger District picture. Our campus was designed with energy and water efficiency in mind, so, we do have an unfair advantage when it comes to ranking our performance against other schools and facilities in the District!

Our LEED Gold campus focuses on student wellness as well, from materials made with recycled content, to abundant natural light, outdoor educational spaces for every classroom, acoustical comfort designed to support the learning environment, and a water/energy touchscreen and website for us to learn about the natural resources needed to run our building. An edible garden offers our students the opportunity to explore the process of growing healthy food, demonstrates some of the responsibilities of tending a garden, and enables them to connect with harvesting and cooking the food they grow. It is a challenge to sustain a garden, and we depend on outside partnerships like *Cooking with Kids* and *EarthCare* to offer curriculum and support. The demands on a teacher's instructional day are many, so needing to balance *Common Core State Standards* with activities outside the required curriculum is always present. Our fall afterschool gardening club provides an alternative to the traditional classroom day.

One way SFPS measures building performance is through the EPA's Energy Star score, as well as looking at the energy used per square foot. In 2013, the District average for energy use per square foot was 55, and Amy Biehl's rate was 31, which was the best score of all 32 District properties. We also had the highest Energy Star score, at 98, and are in the process of applying for an Energy Star certification. Water is an incredibly important natural resource, especially in this semi-arid mountain climate. As a District, we combine irrigation and domestic water use totals in our student/staff per gallon average, and we found that even with the significant landscaping and gardening at ABCS, we still use only 4.2 gallons per person per day, or less than half the District average.

SFPS, and ABCS, are also focused on waste reduction, and increasing our recycling rate. Our recycling club, along with a helper from each classroom, runs the school-wide recycling program. Part of the program is to bring items which aren't recyclable back to the classrooms they came from to educate the students and teachers about what is recyclable in Santa Fe. A student written recycling video is currently in the editing process, and will be available on the website to support other school recycling efforts.

We are fortunate to have the District's largest solar PV array on our rooftop, at 74kw. The energy generation is tied into the lobby monitoring touchscreen, along with water use, natural gas



use, and the separated electrical use from the lights, the HVAC system, and plug loads. Amy Biehl CS is the District's first geothermal building, and we have a second geothermal school opening in the fall. The largest solar array distinction won't last for long, which is fantastic, as we have a 75 kw, 196 kw, and a 63 kw coming on line this summer.

As mentioned previously, the instructional demands on our staff are tremendous, and every minute in the classroom is precious. Although there is no mandated sustainability or environmental curriculum, many partnerships have developed to support these efforts. Our local Audubon chapter, the *Randall Davey Audubon Center*, has teamed up with Amy Biehl staff to offer every student experiences around some aspect of ecology and the natural environment. Every student has the opportunity to explore healthy eating and cooking habits with the nationally recognized *Cooking with Kids* program. Our local *Wild Birds Unlimited* helps support a bird sanctuary in one of the outdoor classroom spaces, attracting wildlife and many bird species from the area. A respect for nature and oneself is a common thread throughout these programs.

While we continue to develop our consciousness and new habits surrounding environmental stewardship, we are proud of our accomplishments, and our staff, students, and families. Amy Biehl Community School is striving to create a healthier, more sustainable, more secure future for our children and community, and we are honored to participate in the Green Ribbon Schools program, and to represent New Mexico at the national level.

### **PART III – DOCUMENTATION OF STATE EVALUATION OF NOMINEE**

The New Mexico Public School Facilities Authority (NMPSFA) formed the New Mexico Green Ribbon Schools Committee (NM-GRS) in 2013 to initiate state participation in ED-GRS for the first time. Representatives from NMPSFA, NM Public Education Department, NM Energy, Minerals & Natural Resources Department, NM Department of Health and the private sector served as members to develop the state scoring materials, establish outreach, and select this year's nominee, **Amy Biehl Community School (ABCS)**.

**ABCS** is an amazing facility and exhibits exemplary features in its design and operation. The committee agreed that it is the best implementation of Green Ribbon School principles in New Mexico in this year's competition. An edited version of the school's application submission is attached detailing achievements in all three of the ED-GRS Pillars and significant Elements. The following are selected highlights of what the NM-GRS committee noted in the ABCS application as strong points:

#### **Pillar I:**

Energy Star score of 98 • Utility monitoring • LEED Gold certification • Rainwater harvesting & grey water systems • Decrease in baseline energy usage • 74kw solar panels • Curb cuts to channel runoff • Composting • Recycling • Transportation study • Bike racks • Alternative fuel vehicle parking • The *Green Guide*



**Pillar II:**

Integrated pest management • Nontoxic cleaning supplies • Smoke free campus • IAQ provisions • Natural resource conservation • Farm to School • School garden • Cooking with Kids • Student fitness assessments • Track and improve fitness progress • Outside groups partnership to support student health • Academic, anti-bullying and social success partnerships

**Pillar III**

The *Green Guide* • Energy dashboard • Sustainability-themed events • cold frames & hoop gardens • Cooking with Kids program • ISEC participation • Discovery walks • Bird sanctuary

**Nominating Authority’s Certifications**

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school’s eligibility and compliance with the following requirements is true and correct to the best of the Authority’s knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency New Mexico Public School Facilities Authority

Name of Nominating Authority Mr. Robert Gorrell, Director

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

A. Lopez Date: 01/31/14  
(Nominating Authority’s Signature)



**Date:** 1/30/2014

**School Name:** Amy Biehl Community School (ABCS)

**Street Address:** 310 Avenida del Sur      **City:** Santa Fe      **State:** New Mexico      **Zip:** 87507

**School Website:** Amy Biehl website - <http://www.sfps.info/index.aspx?nid=1222>

**School District Website:** Santa Fe Public Schools [www.sfps.info](http://www.sfps.info)

**(Please note:** To view our Energy Conservation Program [overview](#) and [current initiatives](#) please go to Home page and scroll to bottom of the page, under “Tell Me About...” click on “Energy and Water Conservation”)

**Curriculum:** (YES) Elementary (PK-5 or 6)    (YES) Public    (YES) Suburban

**Is your school in one of the largest 50 districts in the nation?** NO

**Total Enrollment:** 501

**Percent of students from disadvantaged households:** 68%

**Attendance rate:** 92.1%

**Percent receiving FRPL:** 68%

**Percent of limited English proficient:** 26%

**Other measures:** Mobility Rate = 7.7%

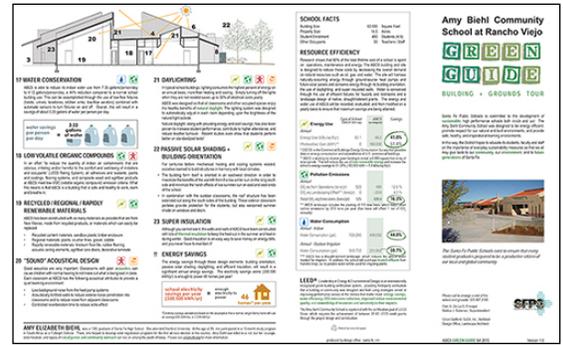
---

## **Summary Narrative:**

Named after Amy Elizabeth Biehl, the talented young woman from Santa Fe whose life was tragically taken in 1993 while working for voter rights in South Africa, **Amy Biehl Community School (ABCS)** is a K/6<sup>th</sup> elementary school designed for expansion to a Pre-K/8<sup>th</sup> grade facility. The **ABCS** campus, located on Santa Fe's far south side, sits within a medium socio-economic neighborhood, slowly under residential development, and isolated from typical urban services, infrastructure, and amenities.

Opening in August 2010, **ABCS** leads the Santa Fe Public Schools (**SFPS**) District facilities in sustainable design, energy savings, and environmental principles, having received **LEED** Gold Certification in 2013. **ABCS** also carries the District's highest Portfolio Manager score of **98%**, as well as the District's lowest EUI of **31.4 kbtu/sq. ft.** **ABCS** places in the District's highest performance ranking, designated as an “Innovation School”. **ABCS's** conservation mission is to save energy, celebrate the natural environment, and promote a healthy lifestyle, while creating an effective and inspirational learning environment via the integration of the building architecture with the school's curriculum and day to day life. This school is not only functional, durable, and easy to maintain, but also serves as a teaching tool for the students and faculty. Outdoor nature-based learning classrooms celebrate elements of the natural environment, engaging the students with the sun, landscape, flora and fauna, soils, and panoramic mountain views.

Utilizing the school's **Green Guide**, student-led tours of campus help introduce visitors to the concepts of environmental design and sustainability. Students are exposed daily to an "informal" and embedded environmental education. An interactive energy and water dashboard in the lobby, linked to a website accessible by all, offers real-time energy and water building data, along with information on a variety of green features and a weather station.



Natural daylighting is abundant throughout. A ground source (geothermal HVAC) heat pump system is supplemented by a **74kw** solar array. Rainfall is captured by a series of sloped metal roofs and collected into a group of cisterns; the students utilize the harvested rain in the community garden, sustaining the vegetables that are later consumed and enjoyed in the Cooking with Kids Classroom in which all students participate. Possibly the most notable aspect of the school is the abundance of natural daylighting integrated into the classroom environment and the building's architectural form. The design promotes and encourages the use of natural daylighting into every classroom, motivated by studies which find increased test scores and decreased behavioral problems related to higher levels of natural light.

Artificial lights are automatically dimmed as natural light increases, reducing the heat generated from the electrical lamps. The consequent reduction in cooling demand saves the District in operational costs each month, and reduces the building's carbon footprint. Pursuant to the integration of natural daylighting into the classrooms, a combination of pitched metal and low-sloped roofs is utilized. The pitched, standing metal seam roofs allow the introduction of daylight into the interior spaces through clerestory windows or "monitors" in the upper walls. Through selection of appropriate glazing materials (i.e. translucent and clear glass), these "monitors" are oriented to the south and north without causing glare or overheating of the interiors. The sloping metal roofs extend beyond the outer walls to provide shading of windows and protection of the outdoor nature-based classrooms below. A gray water system was installed to ensure wastewater was reused and/or reclaimed through the community-based wastewater treatment plant. The intention was to bring that gray water back to **ABCS** irrigation, though at present, all gray water is reused throughout the neighborhood before reaching **ABCS**. As the housing increases, we hope to have access to gray water for the school's xeric landscape.

Beginning its fourth year of operation, **Amy Biehl Community School's** successes include energy savings, the establishment of a healthy, safe, and happy learning environment, and an increasingly socially and environmentally conscious staff and student body. The relatively isolated location of the **ABCS** site, as well as decline of residential development near the school, has limited the opportunity for most students to walk and/or bike to school, thus compounding the need for parent pick-up/drop-offs and bus service. The intense demands on instructional time can constrain the teachers' opportunities to fully implement a nature-based learning curriculum, or integrate the building's

architectural features into the daily lesson plan. Implementation of the Common Core Standards does present the opportunity for increased integration of sustainability and environmental concepts into the daily educational lives of students and faculty.

---

**1. Is your school participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars? YES**

- Energy Star Portfolio Manager: Score = 98 (as of 11/30/2013)
- EcoSchools Project Pathways: 2 projects in SY 2011/12 and 8 projects SY 2012/13
- Utility Direct/SchoolDude: utility monitoring/monthly reporting is posted on District website

**2. Has your school, staff or student body received any awards for facilities, health or environment? YES**

- USGBC LEED GOLD Designation in 2013: School specific
- Energy Star Designation in 2012: School specific
- NM-ASLA Communications Honor Award in 2012: School specific, for Amy Biehl *Green Guide*
- NM Association of Energy Engineers Corporate Conservation Award in 2012: District wide
- Climate Change Leadership Award in 2012: District wide
- Large Business Recycling Award in 2012: District wide
- Sustainable Santa Fe Water Conservation Award in 2013: District wide

*Please Note: While many of these awards are District-wide, ABCS is an integral part of district sustainability efforts.*

## Pillar 1: Reduced Environmental Impact and Costs

---

### Category: ENERGY

**1. Can your school demonstrate a reduction in Greenhouse Gas emissions? YES**

**How?** Focused Facility and Behavioral Energy Management, including a 74kw Solar PVArray

**Over (m/yy - m/yy):** 07/10 – 06/11 compared to 07/12 – 06/13

**Initial GHG emissions rate (MT eCO<sub>2</sub>/person):** 0.68/person (332.72 Met. Tons)

**Final GHG emissions rate (MT eCO<sub>2</sub>/person):** 0.49/person (260.72 Met. Tons)

**Offsets:** 56.2 Met. Tons **How did you calculate the reduction?** Using EPA Conversion Factors

The HVAC system at ABCS is remotely controlled and monitored, allowing for occupied and unoccupied temperature settings, and maximum control of energy use in the building. "Sleep mode" expectations are disseminated to all staff and students, outlining afterschool, weekend, and vacation expectations for conservation. Reporting of energy and water waste situations is actively encouraged and expected. The installation of an interactive energy and water monitoring dashboard touchscreen in the lobby, as well as an accompanying website allows for building use monitoring and engagement with the 74 kw solar photovoltaic rooftop installation.

**2. Do you track resource use in EPA ENERGY STAR Portfolio Manager? YES**

**If yes, what is your score?** 98 ENERGY STAR certification awarded in 2012, Certified PE in process of applying for 2014

**3. Has your school reduced its total non-transportation energy use from an initial baseline? YES**

**Current energy usage (kBtu/student/year):** 4,194

**Current energy usage (kBtu/sq. ft./year):** 31.4

**Percentage reduction:** 38% from 07/12 – 06/13 compared to ASHRAE Baseline

**How did you document this reduction?** We enter monthly use/cost into SchoolDude's Utility Direct software for every SFPS facility, generating graphs for each site to build awareness and goal setting.

**4. What percentage of your school's energy is obtained from:**

**On-site renewable energy generation:** 29% Type 74 kw rooftop, grid tied solar photovoltaic array

**Purchased renewable energy:** 70% of the school's carbon emissions were offset for the first two years, (or 976,276 kwh) Green-e Certified Clean Source through Renewable Choice ENERGY

**Participation in other federal or state school energy program:** Our Solar PV system was funded through a community General Obligation Bond, with an Energy Conservation Package specifically targeted towards energy and water use reduction

**5. In what year was your school originally constructed? Occupied in July of 2010**

**What is the total building area of your school?** 64,516 square feet

**6. N/A**

## **WATER AND GROUNDS**

**7. Can you demonstrate a reduction in your school's total water consumption from an initial baseline?**

**Average Baseline water use (gallons per occupant):** The SFPS District average, combining irrigation and building use from year round programming, including both staff and students, is 8.5 gallons per person, per day (a 365 day calendar year)

**Current water use (gallons per occupant):** Using the same parameters as above, ABCS' use is 4.2 gallons per person per day, or less than half the District average

**Percentage reduction in domestic water use:** Billing/infrastructure system does not separate

**Percentage reduction in irrigation water use:** Billing/infrastructure system does not separate

**Time period measured:** 07/01/2012 – 06/31/2013

Our Utility Data is entered monthly into Utility Direct using utility bills, by the Energy Conservation Program Coordinator. We compile an All SFPS Facilities month by month, year by year comparison, as well as graph each individual site. Graphs are posted monthly on our website, as well as sent to all SFPS employees

**8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate? 100%**  
**Types of plants used and location:** A site plant list is available upon request.

**9. Describe alternate water sources used for irrigation.**

ABCS was constructed with water efficiency in mind. Four 1,400 gallon above ground water cisterns catch rooftop storm water. Two cisterns feed hoop gardens; the other two feed the edible garden. Gray water infrastructure exists to irrigate landscape but it does not yet generate sufficient gray water.

**10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces.**

Water is retained and utilized on-site. If rainfall exceeds design capacity, water is diverted into adjacent historic watershed (*arroyo*). Parking lot curb cuts channel water into landscaping and on-site collection pools are dispersed in a cascading fashion. More than one acre of the campus is undeveloped & naturally permeable.

**11. Our school's drinking water comes from:** Municipal water source

**12. Describe how the water source is protected from potential contaminants.**

City of Santa Fe's Environmental Compliance Office is responsible for protecting our source waters, ensuring that our drinking water meets/exceeds minimum water quality standards set by State and Federal law and regulations. We comply with the Federal Safe Water Drinking Act, through cyclical water sampling and analyses.

**13. Describe the program you have in place to control lead in drinking water.**

The City of Santa Fe supplies our drinking water, and tests for over eighty contaminants. The most recent round of lead testing took place in August of 2012, as required. The Maximum Contaminant Level (MCL) met state and federal regulation level, and the City will continue to comply with testing.

**14. What percentage of the school grounds are devoted to ecologically beneficial uses?**

Approximately 56% of the school grounds are dedicated to ecology, including six outdoor classrooms. Open space at the front and rear portions of the property are naturally hydro-seeded, preserving and celebrating the indigenous landscape. The natural landscape, vegetable garden, and bird sanctuary all help support native flora and fauna.

## Category: WASTE

**15. What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling and/or composting?**

**A) Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected):** One 6 cubic yard refuse dumpster, picked up 3 times a week, is generally full. This generates 72 cubic yards of trash monthly

**B) Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected):** One 6 cubic yard, single stream recycling dumpster, picked up once a week, is always full(24 cubic yards of recycling monthly).

**C) Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected):**

Very little of the food waste is composted from the cafeteria. Our Cooking with Kids Program, which serves the entire student body, composts all food scraps. Although the volume is not officially measured, it is estimated to be at least 20 gallons a month.

**Recycling Rate =  $((B + C) \div (A + B + C) \times 100)$ :** 25% (not including food waste)

**Monthly waste generated per person =  $(A/\text{number of students and staff})$ :** .13 cubic yards of trash monthly per person (551 persons)

**16. What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed and/or chlorine-free?** ABCS' office and copy paper is a Sustainable Forestry Initiative – Certified Fiber Sourcing product

**17. List the types and amounts of hazardous waste generated at your school:**

**Flammable liquids 0% Corrosive liquids 0% Toxics 0% Mercury 0%**

**How is this measured?** These materials are neither used nor allowed at the elementary school level.

**How is hazardous waste disposal tracked?** Hazardous waste is disposed of through Advanced Chemical Transport, using our NM Environment Department, Small Quantity Generator status.

ABCS opened in 2010 with too much trash service and no recycling service. We right sized their refuse, and brought in a single stream recycling dumpster. Through peer training and the Recycling Club, the recycling rate went from 0%, to 20%and is now at a 25% diversion rate. Glass is “pack in – pack out”to avoid hazard, since recycling is typically hand sorted and student-run. English/Spanish text and picture recycling guides are posted in every classroom and around the school. Recycling bins are placed in every indoor space and outside.

**18. Which green cleaning custodial standard is used?** Sustainable Earth Products, by Staples

**What percentage of all products is certified?** 90% are US EPA DfE, and/or Green Seal

**What specific third party certified green cleaning product standard does your school use?** US EPA DfE, and/or Green Seal

## **Category: ALTERNATIVE TRANSPORTATION**

**19. What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school?** 46% ride the bus, 26% carpool with 2 or more students, 21% are car riders with only 1 student, 4% walk, 3% ride their bikes – this does vary from day to day, and is influenced by weather and seasonal conditions

A teacher-conducted, class by class transportation inventory was done. ABCS was designed for walking and biking, with bike racks, sidewalks, gate access, and ramps. The neighborhood infrastructure is not yet fully developed, but as housing grows, foot and bike traffic will increase.

**20. Has your school implemented? YES**

**Designated carpool parking stalls** – 5 stalls, with 4 alternative fuel vehicle parking spots

**Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.**

The “no idling” concept has been brought forth to the District, though it has not yet advanced. We do not have a Safe Routes program but have ADA-compliant walkways, ramps, and crossings on campus. (This application has encouraged exploration of a Safe Routes program!)

**21. Describe how your school transportation use is efficient and has reduced its environmental impact:**

Our Transportation Director has worked to maximize bus route design, ensuring that student ridership time is minimized, and route overlap is eliminated. Less fuel is consumed, and there are less GHG emissions.

**22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships.**

The students participates in a number of environmental activities; Audubon Ecology Study, Harvest Festival, Earth’s Birthday Project, Gardening Club, a Fundraiser for the Wildlife Center, and the Inquiry Science Education Consortium (ISEC) through Los Alamos National Labs. Individual grade levels/classes partner with; Wild Birds Unlimited in the outdoor classroom bird sanctuary, classroom hoop houses for seasonal food growing, and food/book/clothing drives. The environmental leadership group EarthCare, and Cooking with Kids, engages students in food awareness, the growing cycle, composting, and environmental justice issues. A “Green Guide” offers guided tours of LEED sustainability elements.

Pillar 2: Improve the health and wellness of students and staff

---

**Category: ENVIRONMENTAL HEALTH**

**1. Describe your school’s Integrated Pest Management efforts:**

ABCS Integrated Pest Management (IPM) relies on physical/mechanical responses to pests as the first response. Verbal reports, visual observations, proper sealing of cracks or penetrations, door sweeps, non-toxic monitoring boards, and monthly interior and exterior inspections all serve to reduce pesticide or insecticide use to the least utilized action. When necessary, areas are chemically treated directly, with no broad spray applications. An inspection/issue/resolution report is issued quarterly to the school District.

**2. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use:** Pesticide or insecticide use is a very last resort, and the efforts to reduce use are constant.

**3. Which of the following practices does your school employ to minimize exposure to hazardous contaminants?**

**Our school prohibits smoking on campus and in public school buses.** Signage is posted at all facility entrances, as well as school buses, informing occupants and visitors that smoking is prohibited on all SFPS property.

**Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school.**

**Our school uses fuel burning appliances and has taken steps to protect occupants from carbon monoxide (CO)** CO2 sensors are in every classroom and office space, and tied into the DDC remote controls. Carbon monoxide producing equipment is used for heating, cooking, and domestic water heating. In all instances this equipment is designed to vent carbon-monoxide and other combustion gases to the outdoors, away from fresh-air intakes.

**Our school has identified any wood playground or other structures that contain chromate copper arsenate and has taken steps to eliminate exposure.** Playground equipment contains no CCA

**4. Describe how your school manages and controls student and staff exposure to chemicals (including pesticides and cleaning supplies) routinely used in the school:**

As described in Pillar 2, Question 1, we always strive to use pesticides or insecticides as the last resort, and employ our best efforts to deal with all issues in a non-toxic way. If insecticides or pesticides are applied, it is never in the presence of children, and focused in a very direct, non-broad application. Our cleaning supplies, with the exception of Lemon DC Plus, are US EPA DfE, or Green Seal compliant. Our floors are cleaned with a chemical free method with a Zamboni Tenant and are never stripped or waxed.

**5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school:**

Paints, carpet, and tile are all LEED compliant, so are low or no VOC, minimizing any respiratory reaction to off-gassing. The HVAC air systems are carefully filtered for air-born particulates at the fresh air supply and returns, and provide outside air ventilation. Routine and thorough cleaning with “green” cleaning supplies mitigates air-born particulates and fumes.

**6. Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup mold or removes moldy materials when it is found:**

Staff and students are actively encouraged to report any evidence of leaks or water waste, and these situations are promptly addressed. If areas become wet, they are dried immediately, repaired, and any potential mold situations or materials removed. New Mexico air has a consistently low moisture level, which mitigates mold or mildew growth. Staff and students have become very sensitive to conditions of possible health hazards, and communicate concerns to the school’s administration with confidence. It is our intention to always respond to them appropriately.

**7. Our school has installed local exhaust systems for major airborne contaminant sources: YES**

Our kitchen has an independent exhaust system which is tied into the kitchen equipment and operates only when necessary. The art room is equipped with a kiln, which has an exhaust system of its own.

**8. Describe your school’s practices for inspecting and maintaining the building’s ventilation system and all unit ventilators to ensure they are clean and operating properly:**

Each unit and the overall system are inspected at the beginning of each season. Filters are replaced and dated for tracking. The HVAC system is remotely controlled and monitored by direct digital controls, using the Delta System. If airflow is diminished or CO2 sensors are reporting high levels, issues with performance and ventilation can be addressed immediately.

**9. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards.**

Designed to meet ASHRAE Standard 62.1-2004, the school uses energy recovery ventilators (ERVs) in a dedicated outside-air ventilation system. Typically, the ERVs deliver fresh-air to individual heat-pumps for ventilation in classrooms and administration areas. In some areas, air-handlers providing heating and cooling deliver required ventilation. The building management system monitors fresh-air intakes, generating alarms upon deficiencies. Spaces are also equipped with operable windows for natural ventilation.

**10. Describe other steps your school takes to protect indoor environmental quality:**

Along with cyclical fresh air delivery, the option of natural ventilation through operable windows, filtration at fresh and return air points, and no VOC building materials, the building is also acoustically healthy. Meeting ANSI S12.60-2002 standards, effective teachers are able to function in classroom volumes that do not exceed 14,000 cubic feet, achieving a reverberation time of .7 seconds.

LEED signage strategically placed in the building informs the occupants of the benefits of acoustical comfort, extensive daylighting, non-toxic building materials, and natural resource conservation, creating a common sense of purpose and awareness. A sense of building pride and ownership has developed among the students, staff, and parents, and they are quick to communicate conditions not conducive to a healthy learning environment. A consistent year-round building temperature of 72° F during occupied times is our standard, and deviations or irregularities are quickly reported.

## **Category: NUTRITION AND FITNESS**

### **11. Which practices does your school employ to promote healthy eating, physical activity and overall school health? Describe the practices and provide specific examples:**

Twelve years ago, SFPS was one of three pilot Districts chosen as a Farm to School participant, and we are proudly still taking part today! We buy local produce year round, with salad greens and sprouts available all four seasons. A local food bid opened our procurement process to even more community farmers, and this ability to buy locally will continue to grow, sustaining our farmers, and keeping fiscal resources close to home. Every child participates in the Cooking with Kids program, where students help grow, harvest, cook, and study the food they consume.

**Our school participates in a Farm to School program to purchase locally grown food for school meals or snacks.**

**Our school has an edible garden and it is used to teach students about how food is grown.** ABCS has a designated school garden, where edibles are grown from spring to fall, culminating in a fall community Harvest Festival. Students prepare the soil, compost, plant, weed, water, and study in the school garden. Hoop Houses are used to grown winter greens.

**Over the past year, our students have spent at least 120 minutes per week in supervised physical education.** Our students receive a required 60 minutes of supervised physical education weekly, per State standards.

**Our school provides regular, on-going opportunities for physical activity before, during and after school**

**Our school physical education program assesses student fitness and activity levels and teaches students about the importance of physical activity and fitness to help them develop patterns of lifelong, health-promoting physical activity.**

Supervised recess is provided before school, and after lunch. Along with the more traditional organized sports, such as basketball, wrestling, and cheering, a First Serve afterschool tennis program is offered. Girls on the Run provides a non-competitive fitness opportunity, helping to develop self-esteem and life-long fitness habits in girls grades 3-5. Jump Rope for Heart “heart health” program uses jump-rope to encourage physical activity and health awareness. The PE teacher uses Personal Best Days from the SPARK Curriculum, assessing student fitness on a quarterly basis. Students not only keep track of their progress, they strategize on ways to improve and bring that fitness activity into their homes.

### **12. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? YES**

ABCS partners with Audubon NM, AmeriCorps/EarthCare, Wellesley Village Church, Cooking with Kids, Wild Birds Unlimited, The Wildlife Center, Whole Foods, the Food Depot, Santa Fe Preparatory School, and the SFPS Adelante Program

### **13. Does your school have a school nurse and/or a school-based health center? YES**

Certified Nurse 2 days a week, and a Nurse's Aide the other 3 days a week

#### 14. Describe your school's efforts to support student mental health and school climate:

Grief, anger, and counseling groups exist to support students through challenging times. Breakthrough Santa Fe engages 6<sup>th</sup> grade students who experience limited academic support, partnering them with high school and college students to share organizational and study skills promoting academic and social success. The District-required Second Step program offers anti-bullying skills and strategies, and Reading Buddies foster reading/social relationships between our upper and lower grade students.

### Pillar 3: Effective Environmental and Sustainability Education

---

#### Category: ENVIRONMENT AND EDUCATION

#### 1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships.

**Our school has an environmental or sustainability literacy requirement.** While neither the State nor Santa Fe Public Schools directly require sustainability or environmental literacy education, **ABCS** has woven these concepts into lesson plans, projects, and events. Having adopted the Common Core Standards, increased opportunities exist to integrate environmental literacy into the instructional day.

The architecture and technology of the building itself exists as a canvas, or backdrop, for sustainability consciousness, inviting students, staff, and visitors to see through that filter. The **LEED** Gold plaque greets people in the foyer, as well as signage explaining the basics of our solar photovoltaic generation. Once inside the controlled entryway, which was designed for student safety, several displays invite interaction. A real time energy/water use and solar generation touchscreen offers anyone the opportunity to explore the energy and water used per hour, day, week, month, and year at **ABCS**. This interactive touchscreen boasts the first **Lucid Energy Dashboard** in Spanish, in an effort to equally engage our English and Spanish speaking families.

The **ABCS Green Guide** is enlarged and mounted on the wall adjacent to the touchscreen, explaining each sustainability component of the school, and encouraging self-guided tours of the facility and grounds.

**Environmental and sustainability concepts are integrated throughout the curriculum.** In the first three years of **ABCS'** operation, a strong relationship existed with **AmeriCorps/EarthCare**. These young leaders taught sustainability, all aspects of edible food gardens, recycling, respect for the environment, and helped teachers develop a sense of connection to the natural world. Students participated in weekly lessons integrated with literacy, journaling, and presentations. Events included a fall festival with music, literacy projects, and community cooking and sharing of garden produce. 87% of those staff members are still at **ABCS**.

This year the environmental education has shifted to Audubon, and all students have the opportunity to work with them. **EarthCare** and **Cooking with Kids** have created an afterschool garden club, offering lessons on gardening, composting, and food awareness. Recycling is supported through the recycling club, with every class involved. Each class has a recycling helper, and collectively they manage the school's recycling program, while also educating their peers by returning non-recyclables to the classroom, and explaining why they are part of the waste stream. Several teachers have chosen to create bird sanctuaries, fostering observation and identification skills, responsibilities in daily feeding, and to support the local wildlife. Life science lessons are also supported by four cold frames, and four hoop houses, spread throughout the campus.

**Environmental and sustainability concepts are integrated into teachers' formative and summative assessments.** In past years, **EarthCare** utilized pre and post-tests to evaluate the effectiveness of their program, and to assess student

strengths and prior knowledge. They used this data to enhance and improve their curriculum as well. Because of funding constraints, that level of assessment is not currently in place.

**Students evidence high levels of proficiency in these assessments.** The garden, solar panels, recycling, and sustainable aspects of the built environment often find their way into student writing and the day to day way they talk about their school. One 3<sup>rd</sup> grade classroom has actually made a recycling video for their peers, with intention to distribute District wide as a “how to” on creating a school recycling program. Students’ high level of proficiency is demonstrated not on formalized testing, but in the way they organize fundraisers, think about their environment, work towards supporting groups or creatures in need and demonstrate compassion for others.

**Professional development in environmental and sustainability education is offered to all teachers.** Weekly professional development for teachers started at the beginning of the year. Teaching goals for the school garden were shared and all teachers expected to participate. Written instructions were provided on cold frames and hoop houses, and lessons with the students always included the teacher, who learned alongside his or her students. 87% of those trained teachers are still at **ABCS**.

Teachers are an integral part of **the Cooking with Kids** lessons as well, which not only includes food preparation, but makes geographic and vocabulary connections with the edible ingredients. Composting is a part of the curriculum, and the importance of local farms and produce is always a component of the lesson, as most of the ingredients used in the program are sourced locally.

2. N/A

### **3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge?**

The school-wide participation in the **Inquiry Science Education Consortium** (ISEC) incorporates a number of learning contexts for environmental studies and sustainability. Hands-on learning kits and curriculum are provided, specific to each grade level, and all lessons incorporate scientific thinking, predictions, reflection, and science journaling. Kindergarteners explore seeds and butterflies; 1<sup>st</sup> graders examine organisms, pebbles, sand, and silt; 2<sup>nd</sup> graders investigate soils and plants; 3<sup>rd</sup> grade explores the human body and nutrition; 4<sup>th</sup> grade deals with rocks, minerals, and animal studies; 5<sup>th</sup> grade engages land and water; and 6<sup>th</sup> grade learns about solar energy and environments.

Common skills run through all of the curriculums; charting, graphing, diagrams, citing evidence, mathematical skills, reasoning, and critical thinking all are part of the **ISEC** programming which is sponsored and funded by **Los Alamos National Labs** (LANL).

### **4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways?**

The **LEED** environment is itself a teaching tool for students, staff, and community members. 288 solar panels sit atop the roof for all to see, connected with the energy and water monitoring touchscreen featured in the lobby. While none of these elements are intentionally shared as career pathways, they certainly are green technologies which influence the school’s daily life. This combination is unique to the District, and **ABCS** is celebrated in many ways in our community. A number of elements found at **Amy Biehl Community School**, are woven into our other 31 facilities, all with an emphasis on energy and water conservation, and responsible natural resource use. Because of the community’s emphasis on sustainability at **ABCS**, students have internalized the unique features of their school and have high expectations of the facility.

### **5. Describe students’ civic/community engagement projects integrating environment and sustainability topics.**

Students at **ABCS** engage in a number of environmental and sustainability projects. They organize fundraisers for our local **Wildlife Rehabilitation Center**; invite their parents and community to a **Fall Harvest Festival**, sharing their knowledge of the garden and healthy food habits; they participate in **Earth Day** events where they plant at a community farm, make seed balls, and create recycled bird feeders; they run their school's recycling program, creating a "how to" video for other students; they hold food drives, book drives, and clothing drives, all to support other students and families in need; and they take responsibility in reporting energy and water waste at their school.

#### **6. Describe students' meaningful outdoor learning experiences at every grade level.**

While **Cooking with Kids**, **Project Wet**, and the **Children's Water Fiesta** all get students into an outside learning environment, **Audubon** provides the most comprehensive outdoor learning experiences for every grade level. Threading human impact and conservation throughout each program, every grade level has a different focus. Kindergartners do **Discovery Walks**, learning about habitats and a respect for nature. 1<sup>st</sup> graders study "Happening Habitats", comparing and contrasting animals, and looking at non-living elements for survival. In 2<sup>nd</sup> grade they study **Super Power Plants**, investigating how plants survive in this southwest environment, as well as plants' importance to the ecosystem. 3<sup>rd</sup> graders examine **Animal Adaptations**, both physical and behavioral, and their impact on survival. In 4<sup>th</sup> grade they examine **Nature's Interconnections**, investigating interrelationships between living and non-living things, including the roles humans play in protecting natural resources. And finally, 5<sup>th</sup> and 6<sup>th</sup> grades engage in **Audubon CSI**, where they investigate animal signs, clues left behind, evidence of occupation, tracks, and shelter.

#### **7. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills.**

The above curriculum outlined in question 6, although science aligned, incorporates all subject areas. Students write, reflect, draw, observe, graph, describe, articulate, present, calculate, interpret, analyze, critique, reason, support, connect, defend, and apply, as they explore within this curriculum. With their participation in events such as **Harvest Festival**, **Water Fiesta**, **Earth Day**, fundraisers, and their school garden, they develop relationships, learn to share, broaden their experiences and connections, and learn civic responsibility. They learn that they have a direct link to making their community a healthier, stronger place. They become empowered to affect change, and they acquire the skills to make change happen. The knowledge that they can, and should, be active participants in their community is a life-long lesson, essential to a sustainable and healthy family, neighborhood, state, country, and planet.

#### **8. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships.**

The Architects from **Greer-Stafford**, and Engineers from **Bridgers and Paxton**, were an integral part of the development of this amazing facility. **SFPS** had never engaged in a **LEED** Building process, and they guided us well with their talent and creativity. **The Santa Fe Children's Museum** aided us in developing the outdoor spaces, designing areas to engage the whole child. **Cooking with Kids** and **EarthCare** make the edible garden and its essential learning components available to our staff and students. **The Randall Davey Audubon Center** offers our students outdoor experiences that our school District cannot, and aligns its programming with the Common Core Standards. **Wild Birds Unlimited** supplies our bird sanctuary with bird food, feeders, bird books, and information, creating budding ornithologists and naturalists. The **Food Depot** ensures our students don't go hungry during those off-school hours, and the **Wildlife Center** brings eagles, hawks, bull snakes, owls, and other living creatures for our students to learn from and appreciate.



Figure 1

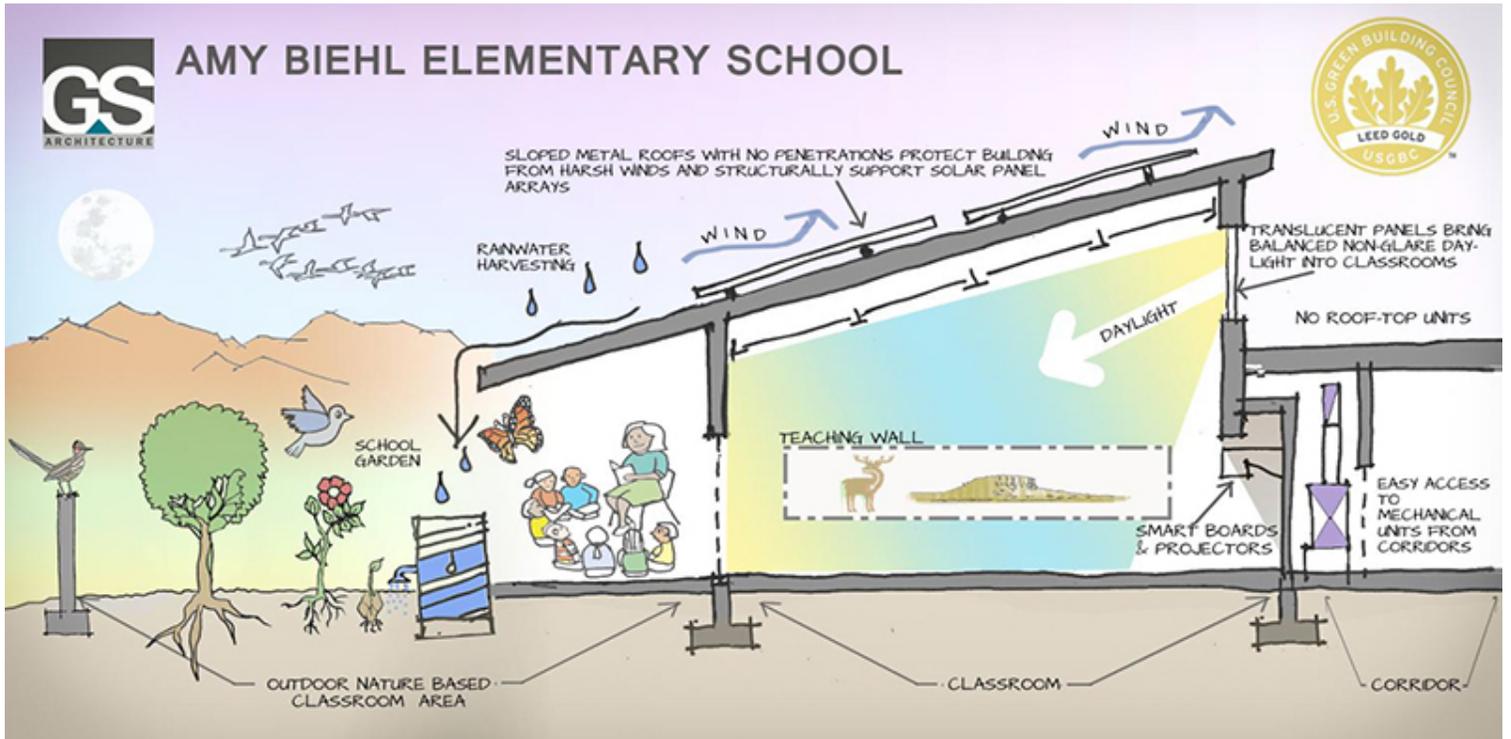


Figure 2

**Figure 1.** The Amy Biehl Elementary School features elements such as: Rainwater harvesting, teaching walls, school garden, translucent panels that bring balanced non-glare day-light into classrooms, and sloped metal roofs with no penetrating protect building from harsh winds and structurally support solar panel arrays.

**Figure 2.** A view of solar panels on the rooftops, 2 of the 4 water catchment cisterns, xeriscape plantings, and our wonderful students!

Figure 3



Figure 4

**Figure 3.** Our Superintendent, past Principal, Board of Education members, and Kinder students, participating in the April 2013 Solar Photovoltaic Ribbon Cutting!

**Figure 4.** An example of the outdoor, nature based classrooms.