



Mountain View
Whisman
School District

Developing a Green School Index for MVWSD

January 18, 2024





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Developing an Index

Board Resolution 05-012623 Climate Change and Green Schoolyards

- The resolution passed by the Board on January 26, 2023 has guided the work of the district and advisory council.
- MVWSD staff presented the first iteration of a greening index on November 16, 2023

Goal

- Determine what elements need to be included in MVWSD's green index.
 - Prioritizing the metrics will create an objective approach that can be used to assess all sites' strengths and opportunities for growth



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Benchmarking and our First Draft

Meeting Schedule YTD

Board of Trustee Meetings

- August 17, 2023
- November 16, 2023

Environmental Sustainability Advisory Council meetings (ESAC)

May 9, 2023 Kickoff

May 17, 2023 Campus Greening

June 14, 2023 Campus Greening

June 23, 2023 Campus Greening

August 16, 2023 Food, Student Health, Plastics/Foodware

September 20, 2023 Greenspace for schools/Community/lighting

October 18, 2023 Environmental Literacy, Biodiversity, Legislative and Funding Initiatives

November 15, 2023 Trends in renewable energy systems, fleet electrification, on the ground school possibilities

SEPTEMBER/OCTOBER 2023 - MEETINGS WITH PRINCIPALS

- 9/19 Overview Meeting with All Principals
- 9/26 Amy Imai Principal Meeting
- 9/27 Landels Principal Meeting
- 9/29 Monta Loma Principal Meeting
- 10/2 Mistral Principal Meeting
- 10/4 Theuerkauf Principal Meeting
- 10/5 Graham Principal Meeting
- 10/9 Bubb Principal Meeting
- 10/11 Castro Principal Meeting
- 10/23 Crittenden Principal Meeting
- 10/25 Stevenson Principal Meeting

OCTOBER/NOVEMBER 2023 - MEETINGS WITH STAFF

- 10/30 Graham Staff Meeting
- 11/2 Crittenden Staff Meeting
- 11/6 Monta Loma Staff Meeting
- 11/7 Landels and Bubb Staff Meeting
- 11/9 Stevenson and Castro Staff Meeting
- 11/13 Amy Imai Staff Meeting
- 11/16 Theuerkauf Staff Meeting
- 11/29 Mistral Staff Meeting

NOVEMBER/DECEMBER 2023 - COMMUNITY MEETINGS

- 11/28 Combined Community Meeting for Bubb, Amy Imai & Graham
- 11/29 Combined Community Meeting for Castro, Mistral & Landels
- 11/30 Combined Community Meeting for Monta Loma, Theuerkauf, Stevenson & Crittenden
- 12/6 General Community Meeting

GREENING METRICS

INTRODUCTION

The following are a set of categories to measure the performance of outdoor school environments. Together, they encompass the aforementioned objectives for Outdoor Greening and Learning at MVWSD.

These categories were created with a number of references in mind, included in the Appendix of this document. One of these references included MVWSD's 2027 Strategic Plan, which states the district's goal to "ensure facilities and resources equitably serve all students."

We recommend that school assessments are conducted every five years. Additionally, this is intended to be a living document that responds to changing conditions at school sites and the district as a whole.



PHYSICAL COMFORT

MVWSD schoolyards are comfortable places that provide all students with access to a range of seasonally appropriate conditions, especially through the provision of shade, the expansion of tree canopy, and the reduction of the heat island effect. Green schoolyards offer a variety of seating options, with an emphasis on natural materials such as boulders, logs and natural paving.



MENTAL WELL-BEING

MVWSD schoolyards provide for the mental well-being of staff, students, staff and administration by offering opportunities and spaces for mindfulness, contemplation, and retreat. Green schoolyards also provide appropriate therapeutic sensory experiences.



EXPLORATION & DISCOVERY

MVWSD schoolyards increase the quality and quantity of interaction with nature by providing opportunities for natural exploration and discovery. Green spaces offer undirected, informal, and unstructured play experiences that encourage students to use their imagination and pay attention to their settings.



OUTDOOR LEARNING

MVWSD schoolyards provide opportunities to learn outside. Learning spaces cater to all ages and abilities, and are located and designed to encourage frequent use. Green schoolyards also encourage ecological literacy by connecting to the greater regional context and providing amenities for outdoor classrooms and instruction.



OPERATIONS & SUSTAINABILITY

MVWSD schoolyards are operationally and ecologically sustainable sites that maximize the use of native and adapted planting, use efficient irrigation systems, limit the use of lawn and impermeable surfaces to areas where it supports specific program needs, and create opportunities for stormwater capture and infiltration. Green schoolyards support site-specific needs, respect maintenance capacity and meet broader District objectives.



STUDENT SAFETY & EXPERIENCE

MVWSD schoolyards are safe spaces where students can access a range of recreational and learning opportunities within the supervision capacity and identified use zone of the school site. Safety is enhanced by buffering and defining student spaces.

MVWSD Greening index

- The first iteration of the Greening Index used a formula of six strategic areas that each had ten scoring areas.
 - Based partly on the Strategic Plan’s intent to create equity among sites
 - Received a lukewarm reception by Board of Trustees
 - Concern was raised about how the weight of a category biased the ratings
 - I.e. Board / Community perception of school site size versus what teachers and staff view as “usable”

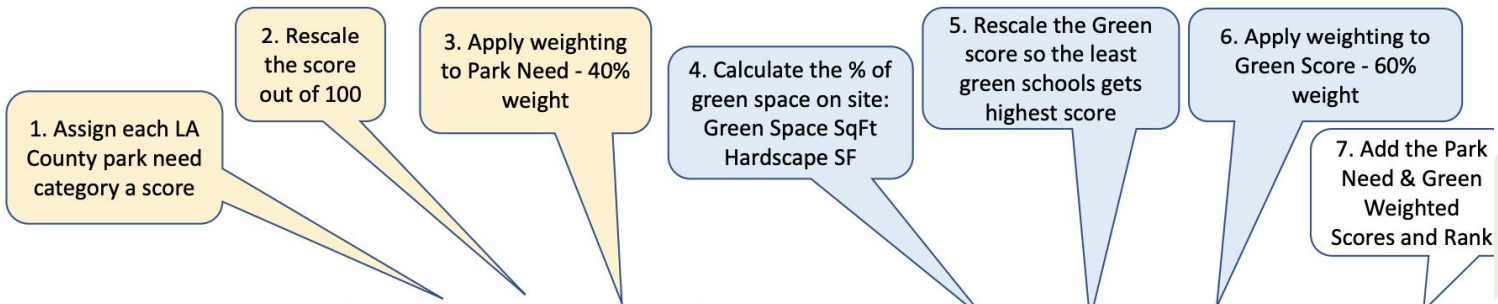
Los Angeles Unified Greening Index

Uses two metrics

- A community-based need index that was created by the County Parks Department
- A campus-specific needs score that was developed by using the facilities condition assessment

LAUSD Final Index

Combining Community Park Need and Campus Greening Needs



Campus Information					Park Need Score				Green Score						Combined Score	
BD	LD	Site ID	Site Name	Type	Park Need	Park Need Score	Park Need Score Rescaled	Park Need Weighted	Green Space SqFt	Hardscape SqFt	Total	Green Score (% Green SqFt on Site)	Green Score Rescaled	Green Score Weighted	Combined Score Weighted	Combined Rank
						A	B = (A x 25)	C = (B x 40%)	D	E	F = (D + E)	G = (D / F)	H	J = (H x 60%)	K = (C + J)	
2	Central	13311	LOCKWOOD EL	EL	Very High	4	100	40	1,049	162,059	163,108	0.64%	99.85	59.91	99.91	1
5	East	14586	MARQUEZ, LINDA ESPERANZA HS HPIAM	SH	Very High	4	100	40	477	180,691	181,168	0.26%	99.65	59.79	99.79	2
1	Central	13914	JONES PC, DR JAMES EDWARD	EL	Very High	4	100	40	495	59,704	60,199	0.82%	99.56	59.74	99.74	3
1	West	13306	BRIGHT EL	EL	Very High	4	100	40	826	99,749	100,575	0.82%	99.56	59.74	99.74	3
1	West	13436	MUIR IMS	MS	Very High	4	100	40	11,987	288,519	300,506	3.99%	99.43	59.66	99.66	5
2	East	13437	HUMPHREYS EL	EL	Very High	4	100	40	2,259	215,601	217,860	1.04%	99.21	59.53	99.53	6
6	Northeast	13632	NOBLE EL	EL	Very High	4	100	40	2,855	216,043	218,898	1.30%	98.79	59.27	99.27	7
1	West	13307	52ND ST EL	EL	Very High	4	100	40	2,329	172,328	174,657	1.33%	98.74	59.24	99.24	8
1	West	13507	LA SALLE EL	EL	Very High	4	100	40	2,504	185,143	187,647	1.33%	98.74	59.24	99.24	8
2	Central	13392	COMMONWEALTH EL	EL	Very High	4	100	40	1,864	130,815	132,679	1.40%	98.62	59.17	99.17	10
1	South	13449	CHARLES W BARRETT EL	EL	Very High	4	100	40	3,455	230,266	233,721	1.48%	98.49	59.09	99.09	11
2	East	13326	2ND ST EL	EL	Very High	4	100	40	2,445	158,027	160,472	1.52%	98.43	59.06	99.06	12
6	Northeast	13442	VICTORY EL	EL	Very High	4	100	40	2,400	153,368	155,768	1.54%	98.40	59.04	99.04	13
1	West	13349	95TH ST EL	EL	Very High	4	100	40	2,882	173,091	175,973	1.64%	98.24	58.94	98.94	14
6	Northwest	13413	LANGDON EL	EL	Very High	4	100	40	3,078	168,477	171,555	1.79%	97.99	58.79	98.79	15

University of Cincinnati study

- Focused on 30 schools built from 2001 to 2006
 - Measured energy savings compared to similar schools
 - All schools were LEED designed and some estimates came from architects and engineers
 - Noted the ancillary benefits of a green school
 - test scores, Asthma reduction, teacher retention, student absenteeism rates, energy efficiency, jobs created, water diversion etc...



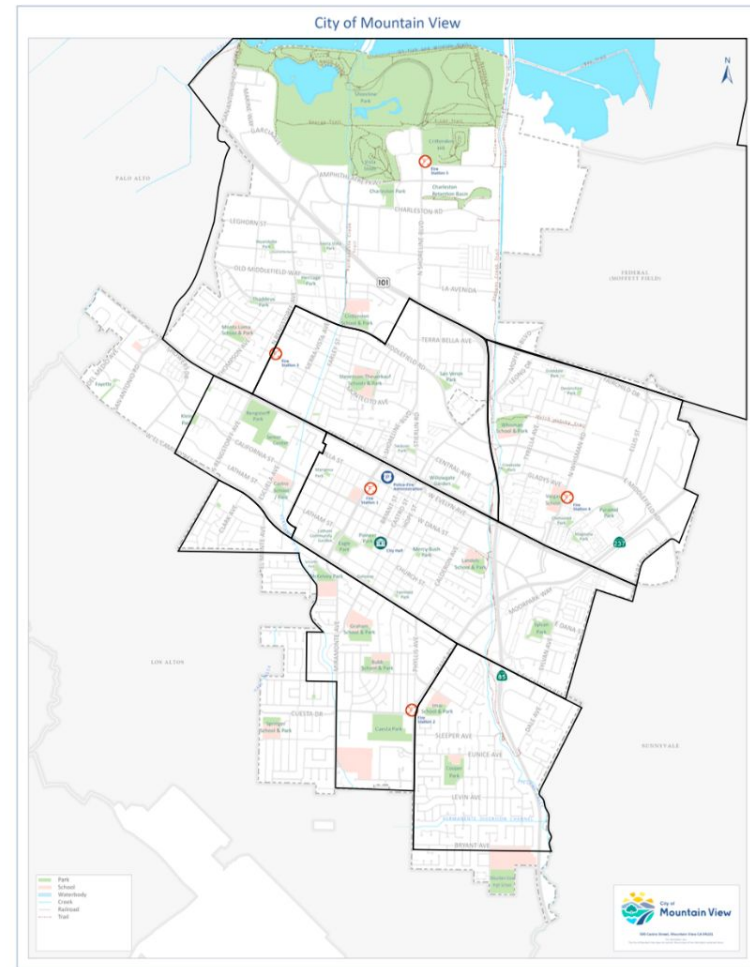
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Additional Data Request

GREENING INDEX SUMMARY: PUBLIC OPEN SPACE WITHIN ATTENDANCE BOUNDARIES

SCHOOLS	PUBLIC OPEN SPACE: SCHOOLS (SF)	PUBLIC OPEN SPACE: CITY PARKS (SF)	TOTAL (SF)
AMY IMAI ES	283,140	479,595	762,735
BENJAMIN BUBB ES	815,442	1,625,222	2,440,664
CRITTENDEN MS	1,102,938	34,641,191	35,744,129
GRAHAM MS	1,650,426	3,760,099	5,410,525
EDITH LANDELS ES	369,824	859,006	1,228,830
GABRIEL MISTRAL ES / MARIANO CASTRO ES	182,020	796,276	978,296
JOSE ANTONIO VARGAS ES	147,668	650,774	798,442
MONTA LOMA ES (INCLUDING PARKS NORTH OF US-101)	583,268	33,802,413	34,385,681
MONTA LOMA ES (EXCLUDING PARKS NORTH OF US-101)	583,268	171,145	754,413
STEVENSON ES	372,002	188,004	560,006
THEUERKAUF ES	372,002	188,004	560,006

Source: 2015 City of Mountain View Community Tree Master Plan.



GREENING INDEX SUMMARY: TOTAL SPACE

TOTAL SPACE is defined as all areas within the perimeter of the school campus.

SCHOOLS	TOTAL SPACE (SF)	SOFTSCAPE (SF, % TOTAL SPACE)	LAWN AREA (SF, % SOFTSCAPE)	HARDSCAPE (SF, % TOTAL SPACE)	SHADED SPACE (SF, % TOTAL SPACE)	OVERHANG (SF, % SHADED SPACE)	STRUCTURE (SF, % SHADED SPACE)	DECIDUOUS CANOPY (SF, % SHADED SPACE)	EVERGREEN CANOPY (SF, % SHADED SPACE)
AMY IMAI ES	313,894	202,835 (65%)	167,577 (83%)	110,059 (35%)	41,002 (13%)	15,983 (39%)	6,209 (15%)	12,594 (31%)	6,209 (15%)
BENJAMIN BUBB ES	318,922	200,804 (63%)	145,934 (73%)	118,117 (37%)	95,143 (30%)	20,439 (21%)	9,179 (10%)	23,670 (25%)	41,854 (44%)
CRITTENDEN MS	224,418	67,998 (30%)	39,683 (58%)	156,419 (70%)	45,282 (20%)	15,059 (32%)	2,363 (5%)	13,949 (31%)	14,797 (32%)
GRAHAM MS	263,703	119,853 (45%)	99,196 (83%)	143,849 (55%)	53,132 (20%)	26,585 (50%)	7,263 (14%)	13,324 (25%)	5,959 (11%)
EDITH LANDELS ES	317,404	212,084 (67%)	193,517 (91%)	105,319 (33%)	86,324 (27%)	19,890 (23%)	7,096 (8%)	25,102 (29%)	34,236 (40%)
GABRIEL MISTRAL ES / MARIANO CASTRO ES	201,043	92,422 (46%)	63,209 (68%)	108,621 (54%)	54,289 (27%)	15,295 (28%)	3,866 (7%)	25,361 (47%)	9,767 (18%)
JOSE ANTONIO VARGAS ES	130,793	78,965 (60%)	0 (0%)	51,828 (40%)	11,396 (8%)	5,637 (49%)	4,609 (40%)	0 (0%)	1,150 (10%)
MONTA LOMA ES	304,388	199,506 (66%)	158,190 (79%)	104,882 (34%)	114,896 (37%)	15,567 (14%)	967 (1%)	89,376 (77%)	9,953 (8%)
STEVENSON ES	164,982	113,145 (69%)	91,126 (81%)	51,837 (31%)	22,685 (13%)	5,188 (23%)	7,656 (34%)	3,383 (15%)	6,460 (28%)
THEUERKAUF ES	270,239	157,889 (58%)	100,296 (63%)	112,350 (42%)	51,440 (19%)	11,809 (23%)	3,612 (7%)	22,683 (44%)	13,336 (26%)

GREENING INDEX SUMMARY: USABLE SPACE

USABLE SPACE (whether or not it is actively used) is defined as supervised areas open to student use during lunch and recess, areas of the school where staff may take students for formal instruction, and living classroom areas.

SCHOOLS	USABLE SPACE (SF)	SOFTSCAPE (SF, % USABLE SPACE)	LAWN AREA (SF, % SOFTSCAPE)	HARDSCAPE (SF, % USABLE SPACE)	SHADED SPACE (SF, % USABLE SPACE)	OVERHANG (SF, % SHADED SPACE)	STRUCTURE (SF, % SHADED SPACE)	DECIDUOUS CANOPY (SF, % SHADED SPACE)	EVERGREEN CANOPY (SF, % SHADED SPACE)
AMY IMAI ES	247,996	138,235 (56%)	115,360 (83%)	109,760 (44%)	36,353 (14%)	15,983 (44%)	6,217 (17%)	11,351 (31%)	2,803 (8%)
BENJAMIN BUBB ES	240,376	136,759 (57%)	103,235 (75%)	103,618 (43%)	79,091 (33%)	18,824 (24%)	9,179 (12%)	22,175 (28%)	28,913 (37%)
CRITTENDEN MS*	224,418	67,998 (30%)	39,683 (58%)	156,419 (70%)	45,282 (20%)	15,059 (32%)	2,363 (5%)	13,949 (31%)	14,797 (32%)
GRAHAM MS	195,713	56,734 (29%)	36,076 (64%)	138,980 (71%)	53,132 (27%)	26,585 (50%)	7,263 (14%)	13,324 (25%)	5,959 (11%)
EDITH LANDELS ES	183,327	104,929 (57%)	86,878 (83%)	78,398 (43%)	55,675 (30%)	17,588 (32%)	7,096 (13%)	18,065 (32%)	12,925 (23%)
GABRIEL MISTRAL ES / MARIANO CASTRO ES*	201,043	92,422 (46%)	63,209 (68%)	108,621 (54%)	54,289 (27%)	15,295 (28%)	3,866 (7%)	25,361 (47%)	9,767 (18%)
JOSE ANTONIO VARGAS ES*	130,793	78,965 (60%)	0 (0%)	51,828 (40%)	11,396 (8%)	5,637 (49%)	4,609 (40%)	0 (0%)	1,150 (10%)
MONTA LOMA ES	141,663	58,203 (41%)	30,819 (53%)	83,461 (59%)	46,283 (33%)	15,236 (33%)	967 (2%)	28,379 (61%)	1,701 (4%)
STEVENSON ES	89,855	43,191 (48%)	32,458 (75%)	46,664 (52%)	13,501 (15%)	5,188 (38%)	7,656 (57%)	285 (2%)	373 (3%)
THEUERKAUF ES	260,867	150,552 (58%)	100,296 (67%)	110,315 (42%)	47,501 (18%)	11,809 (25%)	3,612 (7%)	20,232 (43%)	11,848 (25%)

*Usable space equal to Total Space



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Uncharted Territory

Developing a Greening Index

- Most research is based on school yards and not how to assess schools
- Creating an index is complicated
 - i.e. Unlike in Mountain View, the number of schools within Los Angeles, and LAUSD's size gives it considerable political influence on county operations
 - The University of Cincinnati only assessed LEED schools and did an apple to oranges comparison

Developing a Greening Index, con't ...

- LAUSD benefited from a county assessment that helped to establish priority areas.
 - Included the use of GIS data to help their department develop an assessment
 - The city of Mountain View is currently undergoing an assessment
- MVWSD's first iteration used a qualitative approach to assess the needs of schools which allowed for community input.
 - LAUSD does not include any qualitative information about what is and isn't usable.



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Developing a Rubric

Step 1

- What criteria would you like to assess schools by:
 - List the items that you feel are needed to be included in the Greening Index that will help us to assess schools
 - Can use both qualitative and quantitative measures
 - Eventually, our goal is to develop four to seven criterium that could be used to assess sites (the higher the number the more complicated the rubric becomes)

List of items mentioned during discussion

Example of objective score criteria: softscape +
lawnscape

Step 2

- Time to group criteria
 - Our goal is to reduce redundancy and focus on items that are similar
 - I.e. interior items like shade structures, overhangs and interior shading could be included in one metric

List of items mentioned during discussion

Step 3

- How to assess the areas
 - If the area is qualitative, (i.e. outdoor seating) then the index needs to clearly identify what is exemplary through the use of exemplars.
 - These descriptors need to be
 - specific
 - convey the Board's expectation
 - have a rating system that allows for a Likert scale-like approach that denotes whether this rating exceeds or meets expectation, is developing or does not meet expectation

Assessment Criteria

Descriptor:

Rating scale exemplars



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Applying the Rubric

Next steps:

- Step 1: (January - February)
 - Staff will finalize Greening Index and check in with Trustees to make sure that no other changes are needed
- Step 2: (February - March)
 - Reassess all schools and bring the scores back to ESAC, DAC, DELAC, PTA presidents and Trustees to identify priority areas (i.e. outdoor seating, school gardens, etc..)

Next Steps, continued

- Step 3: (April - May)
 - Once the ratings are finalized staff will begin designing solutions and present options / costs to Trustees
- Step 4: (June)
 - Determine a scope of work, DSA submission, construction bids