KABOOM!

SHAKOPEE MDEWAKANTON SIOUX COMMUNITY

Indigefit kids

Prioritizing Play for Minesota's Native Youth

Methodology and Extended Findings April 2026

INTRODUCTION

Over a three-month period in 2025, KABOOM! used satellite imagery and interviews with tribal leaders to identify 433 playgrounds across Minnesota that are on tribal lands or are close to large populations of Native youth. In October 2025, KABOOM! staff assessed 237 playgrounds using the Playground Quality Assessment Tool that rates playground features and amenities across over 200 separate factors.

Through this process, KABOOM! identified the 51 ***highest priority playgrounds*** in need of replacement across Minnesota. Most of these playgrounds (40, or 78%) are located in ***high priority communities*** – areas within tribal reservation boundaries or in urban areas with large numbers of Native youth. High priority communities also tend to have lower household incomes, lower access to playgrounds and parks, and concerning child health outcomes.

High priority playgrounds typically have multiple playground components (slides, swings, climbers, safety surfacing, etc.) that are in immediate need of replacement or that present a safety hazard to children. In most cases, these playgrounds are also the only play opportunities for certain ages of children in the immediate area.

Most of the high-priority playgrounds are located on tribal land (63%) and in federally designated rural census tracts (88%). Additionally, 29 of the high-priority playgrounds (56%) were located both on tribal lands and in rural census tracts. KABOOM! found that only four of the 51 high-priority playgrounds are in the greater Twin Cities area.

When looking at all 237 playgrounds that were assessed during the IndigeFit Kids Playground Assessment process, KABOOM! found that 83 (35%) contained one or more unsafe components, and 26 (11%) of assessed playgrounds were in immediate need of repair or replacement due to significant safety concerns. While unsafe playgrounds were found across the entire state, some communities had more high-priority playgrounds than others.

Out of all communities included in the assessment, White Earth and Leech Lake had the largest number of playgrounds assessed (24 each) and also the largest percentage of high-priority playgrounds. Despite having many playgrounds, these findings indicate that children in both communities lack access to high-quality play environments. In each community, 14 playgrounds were classified as high-priority sites.

These findings mirror what KABOOM! and others have found with similar analyses. A simple count of the number of playgrounds located in a community does not tell the full story. In many instances, communities will have many playgrounds, but those playgrounds will have older equipment and unsafe components that need to be replaced.

WHAT IS INDIGEFIT KIDS?

IndigeFit Kids is a philanthropic campaign of the Shakopee Mdewakanton Sioux Community (SMSC) to support the health and well-being of Native youth in Minnesota. IndigeFit Kids partnered with KABOOM! to identify playgrounds needing improvement throughout Minnesota's Native communities.

WHAT IS KABOOM!?

KABOOM! unites with kids, communities, and diverse partners to build playspaces in places where we know from data that access has been historically denied. Together, we work to ensure every playspace reflects the unique needs, desires, cultures, and strengths of kids and their communities.

INDIGENOUS DATA SOVEREIGNTY AND INCLUSION IN THIS REPORT

In an effort to respect the indigenous data sovereignty of each tribal nation in Minnesota, KABOOM! spoke with tribal representatives at several times during this project. We sought permission to visit and assess playgrounds and obtained this permission from 9 of the 11 tribal nations in Minnesota.

In addition, we also obtained permission from each tribal nation to include the location and status of each of their playgrounds in this report. In instances where a tribal nation did not want the names or locations of their playgrounds to be made public, we have anonymized the data. Each participating tribal nation was also provided with a full set of raw data on each of their playgrounds to use as they see fit. We appreciate the efforts by each tribal nation to make this project possible and affirm that each participating tribal nation can utilize and govern their own data that was generated as part of this report.

KABOOM! and IndigeFit Kids are working to identify funding to conduct a follow-up assessment with the two tribal nations that were not included in the initial study.

GOAL OF THE INDIGEFIT KIDS PLAYSPACE QUALITY ANALYSIS

The SMSC is partnering with KABOOM! to provide play to Native children around the state of Minnesota. As a part of a larger initiative called IndigeFit Kids Campaign (About – IndigeFit Kids), KABOOM! identified priority communities, existing playspaces, and potential open tracts of land throughout the entire state of Minnesota for new playspaces.

KABOOM! used existing public (or semi-public) data to identify and prioritize tribal communities throughout Minnesota for playground and play infrastructure investments. This was the first step in a longer process to create a prioritized playground location list for all tribal communities in the state.

Playground Assessment through IndigeFit Kids

Through the IndigeFit Kids Campaign with generous funding from the SMSC, KABOOM! embarked on a project to identify where playspace inequity exists in Native communities around Minnesota. There were several goals for this project:

1. Create a priority list to help decision making when allocating IndigeFit Kids funding to build a minimum of five playgrounds that serve Native communities across Minnesota.

2. Provide Native communities with a clear understanding of the quality of play opportunities available to their children. This can be used for fundraising (with or without SMSC's involvement), maintenance, and general record keeping.

3. Advance the body of research dedicated to play/playgrounds and Native communities.

APPROACH AND METHODOLOGY

KABOOM! utilized a three-step process to create the high need community and high need playground lists.

- Step 1: Identify priority communities using existing data at the census tract level and then map playground locations within (and adjacent to) priority communities.

- Step 2: Complete in-person and on-site playground quality assessments using the KABOOM! Playground Quality Assessment Tool.

- Step 3: Using data from steps 1 and 2, identify the highest need playgrounds within priority communities as well as across the entire state of Minnesota.

Step 1: Identifying Priority Communities

The work to create the IndigeFit Kids Priority Playground List began with the identification of specific communities which were most likely to have playgrounds in need of replacement near large numbers of Native children and youth. KABOOM! started this process by focusing on each of Minnesota's ***census tracts***.

A census tract[1] is a geographic boundary that is widely used for the collection of demographic information in the United States. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. Tracts are designed with the intention of being relatively stable over long periods of time (decades) but sometimes must change due to changes in population.

In most cases, census tract boundaries follow common geographic features like roads, rivers, or mountains. State, county, and city boundaries are always part of census tract boundaries. Census tracts serve as a good approximation of a neighborhood or community and are useful for comparing areas within cities and counties.

KABOOM! initially considered using Tribal Census Tracts in our analysis. Tribal Census Tracts are similar to traditional census tracts but conform to reservation boundaries instead of county and city borders. However, since our analysis focused on the whole state, including areas outside reservations and tribal lands, we decided to use the traditional census tract designations for more accurate comparison of tribal and non-tribal areas. In addition, our conversations with tribal members confirmed that many tribal members leave tribal lands and reservations to utilize playgrounds and recreational areas.

In total, the state of Minnesota has 1,502 census tracts. We did not have the capacity to examine every census tract in the state and identify each playground. We therefore sought a way to prioritize certain census tracts based on available information.

For our initial prioritization, we identified census tracts in Minnesota that met one of the following criteria:

- census tracts within reservation / tribal land boundaries – a total of 53 census tracts in Minnesota met this criterion; or
- census tracts outside reservation / tribal land boundaries that have 40 or more Native American / American Indian / Indigenous children (0 to 17 years old) – a total of 51 census tracts in Minnesota met this criterion.

When combined, a total of 104 census tracts met at least one of these criteria – or 6.9% of all census tracts in Minnesota. However, it was unrealistic to attempt to assess the quality of every playground in 104 census tracts throughout the entire state of Minnesota. To further narrow down and prioritize census tracts, we created a priority score for these 104 census tracts using the following data and weights:

[1] A more detailed description of census tracts can be found here:
https://www.census.gov/programs-surveys/geography/about/glossary.html#par_textimage_13
https://www2.census.gov/geo/pdfs/education/CensusTracts.pdf

- Native American Children (45% of total weight)
    - Total number of Native American / American Indian children in each census tract (25% of total weight)
    - The percentage of children in each census tract that classify as Native American / American Indian (10% of total weight)
    - The percentage of households with children that self-reported that they are Native American / American Indian and that are living in poverty (10% of total weight)
- Households with children (any race/ethnicity) in each census tract - where more households with children led to a higher priority (10% of total weight)
- Median household income in each census tract - where lower income led to higher priority (10% of total weight)
- Percentage of total land area covered by parks for each census tract - where lower percentage led to higher priority (5% of total weight)
- Percentage of children 2-5 years old receiving WIC classified as obese - where higher percentage led to higher priority (5% of total weight)
- Number of days of physical activity among 5th graders in county - where lower number of days led to higher priority (5% of total weight). NOTE: since this data was only available at the county level, each census tract in a county was assigned the same value.
- NatureScore value for each census tract to approximate access to nature and green spaces - where a lower NatureScore leads to a higher priority (5% of total weight)
- The KABOOM! 2025 Playspace Inequity Prioritization Index (PIPI) score for each census tract - where a higher score led to a higher priority (15% of total weight). Additional information on the KABOOM! Playspace Inequity Prioritization Index (PIPI) can be found in the Appendix.

All data was transformed into a standardized Z score, weighted, and combined to create a Priority Score for each of the 104 identified census tracts. All census tracts were then ranked based on Priority Score, and the ranked list was split into 5 roughly equivalent quintiles. We also mapped all 104 census tracts so we could visualize where they were located throughout the state (and to determine which ones were urban areas compared to tribal reservation areas). We determined that the top 2 quintiles, or the top 40% of census tracts based on Priority Score, represented the highest need census tracts throughout the state while also providing geographic, tribal, and urban/rural diversity.

The top 2 quintiles (top 40%) resulted in 41 census tracts being designated as high priority throughout the state. Once these 41 high priority census tracts were identified, KABOOM! began a process of identifying existing playground locations in every high priority census tract using a variety of methods.

First, we used internet searches to identify playground locations with each of the high priority tracts. This approach yielded limited success, and in most cases we only found a few playgrounds with most located in high priority tracts in/near urban areas.

Second, using Google Maps we searched for locations marked as 'playground' within each high priority tract. This was slightly more successful, but again all playgrounds identified using this method were in high priority tracts in/near urban areas.

Third, we conducted visual inspections of satellite images in Google Maps and Google Earth to identify playground locations. Members of the KABOOM! Learning and Evaluation team divided up high priority tracts and visually examined satellite images to attempt to identify census tracts. Every tract was visually examined by two different KABOOM! Learning and Evaluation team members to ensure accuracy.

However, this approach was prone to errors / exclusion because it depended on existing satellite imagery which in some cases was old or low resolution (particularly in more remote areas). In addition, we likely missed some playgrounds because playground areas were covered in satellite images by trees / vegetation / clouds / snow. In many cases, rural parts of Minnesota only had two sets of satellite images from the past 8 years.

We focused initially only on playgrounds that were within the boundaries of the 41 high priority census tracts; but as we reviewed satellite images, we quickly found that there were many playgrounds that were just outside or adjacent to high priority census tract boundaries but that were in non-priority tracts. While these playgrounds technically fell outside the borders of high priority census tracts, they are likely still used by Native children. The project team made the decision to include and map any playgrounds that were in non-priority tracts as long as they were within ¼ of a mile of a high priority census tract boundary.

Finally, the KABOOM! team contacted members from each tribal nation and asked them to identify playground locations within their community and to also identify playground locations outside of tribal lands that tribal members use frequently. Tribal contacts were also asked to review existing lists of playground locations for accuracy and to inform the study team if playgrounds had been recently removed, renovated, or replaced.

Communicating with tribal representatives was extremely valuable to our process and identification of existing playgrounds. In one instance, our tribal contact let us know that two existing playgrounds were recently renovated (in 2024) – which was valuable information since existing Google Earth and Google Street View images showed the playgrounds were older and in disrepair. In another instance, a different tribal contact provided us with a detailed list of playground locations under tribal maintenance. This list included at least six locations that we could not find during our visual scan of satellite images. We would have missed these additional playgrounds without speaking to the local contact.

Based on feedback obtained from tribal contacts, the KABOOM! team further expanded our playground identification work to verify and map playground locations for every playground on tribal lands, regardless of whether the playground was located in a high priority census tract (the top 40%). We also verified and mapped every playground location provided to us by tribal contacts regardless of whether or not the playground was located in a high priority census tract.

KABOOM! successfully connected with 9 of the 11 federally recognized tribal nations in Minnesota as part of this work. However, two tribal nations could not get approval from their tribal governments before this work was completed, which resulted in the inability to verify and map playground locations in these two tribal areas. The KABOOM! team was able to still verify and map playground locations outside of these tribal areas (in towns that were outside reservation boundaries). Our hope is that a follow up project will allow for the inclusion of these two tribal nations in the future.

When completed, KABOOM! and our tribal contacts verified and mapped 433 playground locations throughout the state of Minnesota that were in high priority census tracts, within ¼ mile of a high priority census tract, or were identified as playgrounds used by tribal members. These 433 playgrounds included sites in parks or public areas such as campgrounds or community centers, playgrounds located at elementary schools, playgrounds located at early childcare centers (including Head Start locations), and in some cases playgrounds in semi-private areas such as powwow grounds or churches.

Budget and staffing limitations would not allow the study team to visit all 433 playgrounds that were identified and mapped. In addition, the study team was also concerned with the amount of time necessary to access playgrounds in private areas (such as schools and early learning centers). This necessitated the creation of a process to reduce the list to a manageable number of playgrounds that the study team could visit for on-site and in-person assessment.

The KABOOM! study team assigned each of the verified 433 playgrounds to one of five categories to assist with further prioritization.

Category 1: Tribal and Priority – these playgrounds were both within tribal boundaries and within one of the 41 identified priority tracts. Our goal was to visit all of these playgrounds unless there was a challenge getting access to the location (school or early childcare locations often require pre-authorization to access).

Category 2: Non-Tribal and Priority – these playgrounds are not within tribal boundaries but are within one of the 41 identified priority tracts. In most cases, these playgrounds are located in cities or towns throughout Minnesota. Due to limited staff capacity, we were not able to connect and coordinate with all 25 towns and cities in Minnesota that contain these tracts. For this reason, we only visited playgrounds in this category that were open to the public.

Category 3: Proximity to Priority Tracts – these sites are less than 15-minute walk from a priority tract, but not in the priority tract or these are playgrounds in non-priority tracts that tribal contacts specifically identified as being used frequently by tribal members. We visited as many of these playgrounds as possible, while still prioritizing the sites within priority tracts.

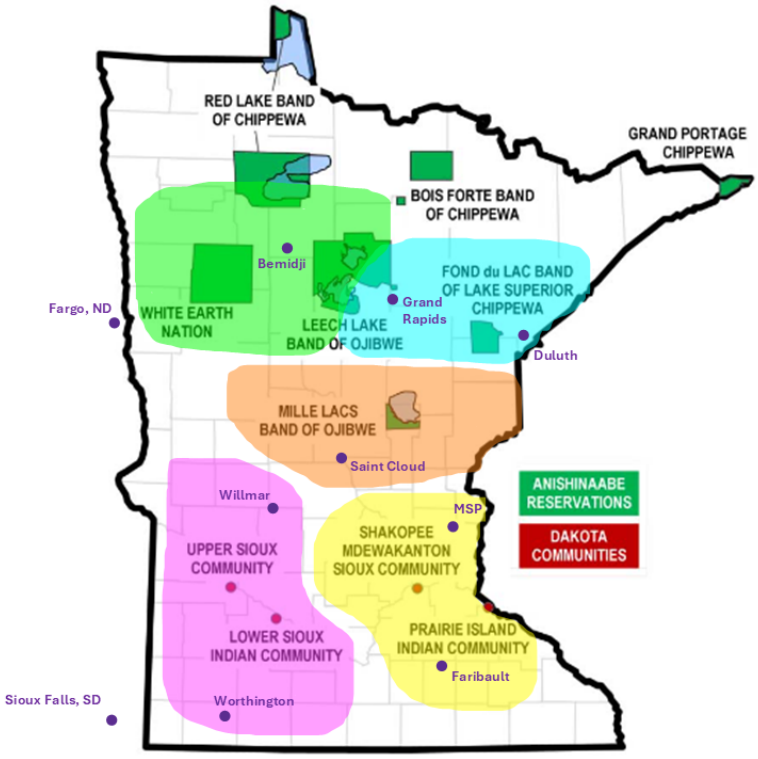
Category 4: Tribal and Non-Priority – these sites are within tribal boundaries but not within one of the 41 identified priority tracts. For some of these tribes we were able to incorporate visiting their land into our October 2025 assessment plan, and we therefore asked them to choose a few playgrounds that we could assess. For others of these tribes, we developed a Virtual Playground Assessment to allow us to gather data from their playgrounds without traveling to their land.

Category 5: Non-Tribal and Non-Priority – these sites are neither within tribal boundaries nor within one of the 41 identified priority tracts. We visited a limited number these locations in situations where playgrounds were located near priority census tracts and when site assessment teams had availability in their travel schedules.

Using this process, KABOOM! committed to conducting in-person playground quality assessments for as many playgrounds as possible in the first two categories (Category 1: Tribal and Priority and Category 2: Non-Tribal and Priority). The KABOOM! team also made efforts to visit as many playgrounds as possible in the third and fourth categories (Category 3: Proximity to Priority Tracts and Category 4: Tribal and Non-Priority). With any remaining time and resources, the team assessed the playgrounds in the fifth category (Category 5: Non-Tribal and Non-Priority).

Step 2: Complete In-Person and On-Site Playground Quality Assessments

In October 2025, twelve KABOOM! staff members traveled to Minnesota to complete playground quality assessments. These 12 staff members were divided into seven teams (five teams of two people, two teams of one each), and these teams were assigned to five regions of the state to complete playground quality assessments. To accommodate the large number of playgrounds in the Twin Cities and Northwest regions, these regions were assigned two teams each. The map below illustrates the five regions in Minnesota created by KABOOM! to facilitate the in-person playground quality assessment process.



Prior to travelling to Minnesota, each member of the KABOOM! quality assessment team received at least 3 hours of training. This training included background on the tribal nations of Minnesota, cultural competence training on visiting tribal lands, guidance on interactions with tribal members, and how to accurately complete the assessment process. In most cases, each member of the quality assessment

team had prior experience completing in-person playground quality assessments or had experience with playground design and construction.

KABOOM! provided each team with a list of playground sites to visit per day, organized into an efficient driving order. Each day's list included sites that teams were required to assess. These sites were placed as close to the beginning of the day as possible. After they completed their required sites, team members were empowered to make choices about their capacity to assess the remaining playgrounds on their list. The number of sites on each team's list was dependent on the expected driving times between the sites.

During each in-person assessment, the KABOOM! team documented the condition of each playground using the KABOOM! Playspace Quality Assessment Tool (PQAT). PQAT is an online survey designed to guide the user through the necessary steps to determine a playspace's quality and condition. It asks questions about site amenities, playspace components, physical activity, and more. Importantly, it also asks questions about the condition of these elements. (For example: having a slide on a playground is great, but not if the slide is cracked, wobbly, boarded up, or otherwise unusable.)

In addition to sections focused on the playground structure, PQAT also asks assessors to document and rate the quality of the playground's accessibility and surrounding amenities. For example, PQAT has sections on the condition of entry/exit pathways for playgrounds (and ADA compliance of these pathways), the presence of lights/water fountains on the playspace, and shade covering the playspace (and whether that shade is natural or manufactured).

The PQAT was completed using a tablet using the offline version of Qualtrics survey software. The PQAT requires assessors to use the tablet camera to document instances of low-quality playground elements or amenities in disrepair. All data was stored locally on the tablet when each survey was completed. At the end of each day the tablet was connected to Wi-Fi and the data can be synched with the cloud and uploaded into the KABOOM! Qualtrics server.

In addition to the traditional in-person version of the PQAT, KABOOM! developed a virtual version of the PQAT for this project. As the KABOOM! team spoke to tribal contacts and began logistical planning for the in-person assessments, we identified two tribal nations that did not did not have any high priority census tracts and that were geographically challenging to reach with limited resources. To ensure that these tribal nations were represented, KABOOM! modified the existing version of the PQAT so that it could be administered via videocall. The virtual PQAT was completed in tandem by a KABOOM! staff member and a tribal representative. The tribal member spoke with the KABOOM! staff member via a mobile device while on the playground site. The staff member then walked the tribal member through the assessment questions. The KABOOM! staff member then documented responses based on video images and descriptions by the tribal member.

Over a 5-day period, KABOOM! staff assessed a total of 237 playgrounds across Minnesota. Most of these playgrounds (234) were assessed with the traditional in-person PQAT. The remaining three were assessed using the virtual PQAT.

The virtual PQAT is similar to the original PQAT, but they are not identical. The virtual PQAT includes changes designed to make assessment easier and more efficient through mobile devices and video calls. Specifically, the categories to rate the condition of playground components were reduced / collapsed, and a few questions that tended to produce redundant answers were removed.

KABOOM! attempted to visit as many playgrounds in person to complete the original PQAT. A playground was only chosen for virtual assessment if it met all the following criteria:

1. The playground must be located on tribal land or in one of the pre-identified priority census tracts.

2. The playground must be located in a census tract with at least 40 children.

3. There must be a community representative with access to a mobile device capable of any kind of video call (Microsoft Teams, FaceTime, Zoom, etc).

4. The playground must have been built after October 2020.

Once the PQAT was completed for 237 playgrounds in Minnesota, the data was cleaned, transformed, aggregated, and weighted to create summarized scores for three categories: play value, playspace quality, and site quality. The scores for these categories were further weighted and combined to create a single ***Playground Quality Score*** for each playground.

The Playground Quality Score is a value between 1 and 4 (with 4 representing the highest need playgrounds).[2] The overall Playground Quality Score was calculated to four decimal places to ensure enough distinction and distribution amongst all 237 playgrounds that were assessed.

Step 3: Identify Highest Need Playgrounds Across Minnesota

With a Playground Quality Score calculated for each of the 237 playgrounds assessed with the PQAT, KABOOM! then turned to identifying the playgrounds with the highest need for replacement in Minnesota. KABOOM! created a Playground Priority Score using five data points:

- The ***Playground Quality Score*** for each playground. This score captures the overall quality of each playground location. The Playground Quality Score contributes 40% to the Playground Priority Score – making it the single most influential data point in the calculation.

- The ***Average Playground Quality Score for the census tract containing the playground***. KABOOM! averaged the Playground Quality Score for all playgrounds in a census tract to determine this indicator. This is meant to identify and prioritize areas (census tracts) that have multiple high need playgrounds in the same neighborhood. A high-need playground in a community surrounded by low-need playgrounds presents residents with some options for other play opportunities. However, communities with multiple high need playgrounds would have fewer opportunities for play and therefore would receive more benefits from a new playground (which justifies prioritizing these communities). The Average Playground Quality Score contributes 15% to the Playground Priority Score.

- The ***Ratio of Children per Playground*** in the census tract. KABOOM! calculated the ratio of children to the number of playgrounds for each census tract. This indicator was meant to prioritize communities that had large numbers of children and low numbers of playgrounds.

[2] A higher Playground Quality Score indicating higher need is consistent with how KABOOM! communicates need and priority when using quantitative data. For example, a higher KABOOM! PIPI score indicates higher need or higher priority. All data was scored / reversed scored to ensure consistency with this approach.

Census tracts with low numbers of children and multiple playgrounds were deprioritized, while census tracts with large numbers of children and a single playground were highly prioritized. The ratio of children per playground contributes 10% to the Playground Priority Score.

- The ***Percentage of Native Children*** in the census tract. Since IndigeFit Kids focuses on the health of Native and Indigenous children throughout Minnesota, this indicator is meant to prioritize areas with large percentage of children who are Native American or Indigenous. For each playground, the percentage of all children who are Native American or Indigenous was calculated for the census tract. The percentage of Native Children contributes 25% to the Playground Priority Score.

- The ***KABOOM! 2025 PIPI Score*** for the census tract containing the playground. The KABOOM! PIPI Score estimates playspace inequity for the census tract containing each playground. The KABOOM! 2025 PIPI Score contributes 10% to the Playground Priority Score.

The five indicators listed above were normalized so that the values could be compared and combined. The normalized values were then weighted to create the final Playground Priority Score. This final Score was used to rank all 237 playgrounds assessed from the highest need / highest priority to the lowest need / lowest priority.

In theory, the maximum possible Playground Priority Score would have been 100. However, that would only have occurred if the same location had the maximum / highest value for all five data points. We found that the highest need playground received a Playground Priority Score of 74.004, and the lowest score was 1.312.

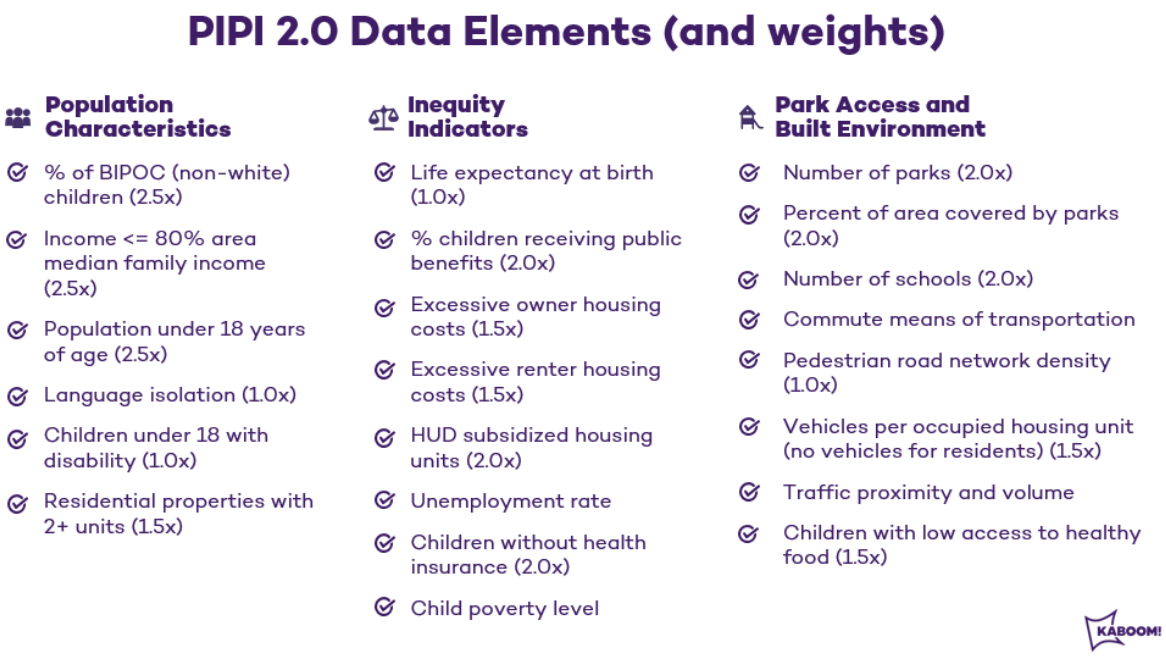
Using this process, KABOOM! identified 51 high-priority playgrounds. These playgrounds have multiple playground components (slides, swings, climbers, safety surfacing, etc.) that are in immediate need of replacement or that present a safety hazard to children. In most cases, these playgrounds are also the only play opportunities for certain ages of children in the immediate area.

APPENDIX A: THE KABOOM PLAYSPACE INEQUITY PRIORITIZATION INDEX (PIPI)

In 2022, KABOOM! developed the Playspace Inequity Prioritization Index (PIPI)[3] to estimate the level of playspace inequity occurring across all 86,000+ census tracts in the United States. PIPI combines data from 21 different indicators to create a single score, allowing us and our partners to estimate the need for playspaces in every neighborhood across the United States. Using PIPI, we can identify and map areas for prioritization and direct our work accordingly.

KABOOM! developed the Playspace Inequity Prioritization Index (PIPI) to help estimate where playspace inequity is most likely to occur. PIPI scores highlight trends in playspace inequity, allowing KABOOM! and its partners to make data informed choices for more equitable investments in building and modernizing playspaces.

The overall PIPI score is a single value that is calculated for every census tract in the United States using 22 different publicly available data points.[4] The overall PIPI score is a value between negative 7.0 (-7.0) and positive 7.0, where a score of 0 represents the average level of playspace equity across the entire United States. Census tracts with PIPI scores between 1 and 7 are the most likely to be experiencing playspace inequity or those areas that lack adequate playspaces and therefore present better opportunities for playspace investment. Negative PIPI scores are census tracts are areas with less estimated playspace inequity and are therefore deprioritized.



[3] Additional information on the Playspace Inequity Prioritization Index can be found here:

https://www.huduser.gov/portal/periodicals/cityscape/vol26num3/ch13.pdf

[4] The original version of PIPI consisted of 21 data elements to estimate playspace inequity. In March 2025, KABOOM! created an updated version of PIPI (PIPI 2.0) that consists of 22 data elements to estimate playspace inequity.

APPENDIX B: THE KABOOM PLAYGROUND QUALITY ASSESSMENT TOOL (PQAT)

PQAT Background and Usage

The KABOOM! Learning and Evaluation Team developed the Playspace Quality Assessment Tool (PQAT) in 2021, and it remains the most comprehensive playground quality assessment tool in the recreation industry. The original PQAT design and subsequent revisions were informed by KABOOM! staff members with Certified Playground Safety Inspector (CPSI) training.

The tool is designed as a multi-section survey which is housed in Qualtrics XM software and takes between 15-40 minutes to complete depending on the size of the playspace and experience of the assessor. The assessors who completed the IndigeFit Kids Playground Quality Assessments were all current or former KABOOM! staff members who received additional training to ensure their comfort with the PQAT.

The PQAT can be completed via mobile device using roaming data services or via a KABOOM!-provided tablet via the Qualtrics Offline Survey app. Assessors are required to be physically onsite to complete the traditional PQAT. A virtual version of the tool was developed for the IndigeFit Kids Playground Quality Assessment process, which required a partner or community member to be physically onsite while on a video call with a KABOOM! assessor.

PQAT Contents

The PQAT contains questions on inventory (what components are present on/around the playground footprint), condition (what is the quality of each component), and activity level (how active is a child likely to be while using each component). This includes both play components like slides/swings/climbers/etc. as well as non-play components such as benches/lighting/restrooms/etc. The components are listed in matrices like the one shown below, with assessors tasked to count each component and assign a score to each category. Assessors choose from a drop-down list of options for the activity level and condition columns.

	Number of Components Number of Component	Activity Level of Component	Condition of Components
Slides			
Sliding Poles			
Climbers			
Overhead events (eg monkey bars, zip lines etc)			
Bridges			
Roofs			
Platforms			
Stairs			
Barriers and Railings			
Other play components			
Non-playspace components within continuous playground footprint (eg Seats or Benches)			

The assessors rate the activity level and condition of each playspace component using the scale below.

Activity Level of Components:

- *Very Active* = component encourages lots of movement and physical engagement (e.g. swing, zip-line, climbing structures, spinners)
- *Active* = component encourages some movement and physical engagement (e.g. slides, poles, stairs)
- *Somewhat Active* = component encourages minimal movement and physical engagement (e.g. panels with moving elements, sensory play tables)
- *Largely Stationary* = component is stagnant and does not require movement (e.g. panel elements, benches/seats)

Condition of Components:

- *Great/Good* = clean, well maintained, free of obvious damage
- *Acceptable* = minor cosmetic damage, easily remedied issues like trash clean-up or paint. Components show signs of wear and tear but not obvious damage.
- *Borderline* = minor cosmetic damage up to 3 critical repairs needed
- *Unacceptable* = more than 3 critical repairs needed, component is deemed unsafe.

The detailed description of each choice is included and accessible in the PQAT instrument itself to help ensure each assessor analyzes and rates playspaces consistently. In addition, as part of the training process, assessors are provided with visual examples of each activity level rating and each condition level rating.

The PQAT also includes several qualitative questions which ask the assessor to provide narration and further details. Assessors also can include any additional or clarifying information they feel is necessary to supplement counts of components or activity level or condition ratings. The PQAT also allows assessors to take 10 pictures of the assessed playgrounds to provide visual evidence of excellent or poor ratings.

PQAT Analysis and the Playground Quality Score:

Once the playgrounds are assessed and the data has been cleaned, the KABOOM! Learning and Evaluation team calculates a Playground Quality Score from the data collected. Numerical scores are given to each rating, and these scores are transformed, aggregated, and weighed to create summarized scores for three categories: play value, playspace quality, and site quality. Further details on which ratings contribute to each category can be found in the figure below:

As shown in the figure above, the final Playground Quality Score is calculated by weighting the categories. Playspace quality is the most important determinant of the final Playground Quality Score and is therefore weighted the highest (60%). Play value is subsequently given a 30% weight, and site quality makes up the remaining 10%.

The Playground Quality Score has a value between 1 and 4 (with 4 representing the highest need playgrounds). The overall Playground Quality Score was calculated to four decimal places to ensure enough distinction and distribution amongst all 237 playgrounds that were assessed.

Once calculated, the final Playground Quality Score can be used by itself to identify playgrounds that should be highest priority for replacement and investment. The Playground Quality Score can also be combined with other data (demographics or population data, geographic or GIS data, etc.) to help create a more tailored playground priority list that reflects local needs and priorities.