

Healthy Housing Principles

CERTIFICATE SCHEME HANDBOOK

Notice

Individuals interested in obtaining the BPI Healthy Housing Principles Certificate of Knowledge will need to know the scope of the certificate and all requirements.

This scheme handbook outlines the knowledge needed for individuals to obtain the BPI Healthy Housing Principles Certificate of Knowledge.

Information in this scheme handbook represents the policies at the date of publication and supersedes information contained in any previously published documents.

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Disclaimer

Eligibility standards, exam content, exam standards, fees, and guidelines are subject to change. BPI will keep the most up-to-date version of this document posted at www.bpi.org. Prior to participating in any available service through BPI, check to ensure that you have based your decision to proceed on the most up-to-date information available. BPI reserves the right to modify documents prior to accepting any application.

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1. About BPI

Founded in 1993, the Building Performance Institute (BPI) is the nation's premier certification and standard-setting organization for home performance professionals. BPI is accredited by the American National Standards Institute, Inc. (ANSI) as a developer of American National Standards. BPI is also accredited as a certifying body for personnel credentials by the ANSI National Accreditation Board (ANAB). BPI develops technical standards for home performance. From these standards, BPI develops rigorous online and field exams to credential the workforce. BPI understands the importance of impartiality in carrying out its certification activities, managing conflicts of interest, and ensuring the objectivity of its certification activities.

BPI offers five certificates (<u>Building Science Principles</u>, <u>Healthy Housing Principles</u>, <u>Site Supervisor</u>, <u>Total Building Performance</u> and <u>Cold Climate Air Source Heat Pump Assessor</u>) that support professional growth in building performance and healthy housing. From foundational knowledge in building science and healthy housing principles to advanced diagnostics and on-site leadership, these credentials help ensure quality, safety, and efficiency in home energy and retrofit work.

In addition, BPI offers 16 professional certifications. Today, BPI Certified Professionals hold more than 18,000 active certifications, supported by a nationwide network of over 100 BPI Test Centers and 250 Proctors.

BPI is a 501(c)(3) nonprofit corporation, incorporated in New York State on January 18, 1996 (corporation number 14-1789014). Our mission is to develop technical standards and provide credentialing for individuals and organizations in the residential retrofit industry. BPI is headquartered in Saratoga Springs, NY.

2. BPI Certificate Schemes

BPI's certificate schemes are developed and continuously reviewed by dedicated scheme committees composed of subject matter experts—professionals with recognized credentials and extensive industry experience. These committees regularly evaluate statistics, monitor industry developments, and assess current certificate scheme requirements to ensure relevance and quality.

Industry feedback is a vital part of this process. Committee members actively seek input from a variety of external sources, including:

- industry associations
- professional groups
- government agencies
- consumer/owner advocacy groups
- manufacturers

3. Outline of the Healthy Housing Principles Certificate

This certificate scheme handbook outlines the knowledge requirements for the Healthy Housing Principles (HHP) Certificate.

This scheme establishes the scope of the Healthy Housing Principles (HHP) Certificate of Knowledge.

Earning the Healthy Housing Principles (HHP) Certificate of Knowledge proves your knowledge of how the different components of a home interact to affect occupant health. Homeowners and renters are a part of the house as a system and a recipient of the downstream effects of how they follow these eight principles:

- Keep it Clean
- Keep it Dry
- Keep it Pest Free
- Keep it Contaminant Free
- Keep it Safe
- Keep it Ventilated
- Keep it Comfortable
- Keep it Maintained

Please note that a certificate is not a license to practice. All persons who obtain this certificate must comply with applicable federal, state, and local laws and regulations governing the profession.

4. Preparing for the Exam

Before you register for the exam:

- Download the latest version of the BPI HHP certificate scheme handbook from www.bpi.org
- Read and understand all the information.
- Refer to the Knowledge Testing List section to be sure that you understand the knowledge required for this certificate.
- Obtain reference materials or take a class to prepare and study for the multiple-choice exam.

4.1 Prerequisites

There are no prerequisites for the Healthy Housing Principles (HHP) Certificate of Knowledge.

4.2 Certificate Fees, Application, and Scheduling

BPI certificate exams are available online and can be taken any day of the week, at any time. Through the BPI Certificate Portal, order your print or online version of the Healthy Housing Reference Guide, complete payment, and access the exam.

4.3 Multiple-Choice Exam

In order to obtain the Healthy Housing Principles (HHP) Certificate of Knowledge, a test taker must successfully complete an open book online multiple-choice exam to assess competency in the critical knowledge areas defined by BPI.

The multiple-choice exam will consist of **75 multiple-choice questions**. There is not a time limit for the exam. You have one year from the purchase of your HHP exam to complete the exam Discussion or disclosure of the content of the exam, orally or in writing, or by any other means, is prohibited. Theft or attempted theft of exam items is punishable to the fullest extent of the law, termination of status, civil liability, criminal prosecution, or other appropriate sanctions.

5. Knowledge Testing List

The Knowledge required for this exam is detailed below.

Assessment Scope (applies to all domains unless noted):

Candidates will be expected to identify, recognize, explain, compare, and select appropriate options within the listed topics at the Recall/Application level using one-best-answer multiple-choice items.

DOMAIN 1: Introduction

Topic: 1.1 The Foundations of Healthy Housing

Knowledge Areas:

- Definition of a healthy home
- House as a System
- Integrated healthy housing approach 8 principles
- · Interconnections and systems thinking
- Occupant signs and symptoms
- Routes of exposure,
- Connections between health and housing

Topic: 1.2 Codes, Standards and Regulations

Knowledge Areas:

- Zoning, building, and housing code differences
- IPMC and local applications
- National Healthy Housing Standard, EPA and other federal guidelines

Topic: 1.3 Equity & Vulnerable Populations

Knowledge Areas:

- Vulnerable groups (children, seniors, disabled etc.)
- Environmental justice and disparities
- Home Health Exposure Triangle
- Social determinants of health

Topic: 1.4 Community Context & Survey Data

- Data driven insights (eg. American Housing Survey)
- Importance of neighborhood and infrastructure. (Codes, zoning, resources)
- Economic impacts of housing on health
- Climate and weather impacts

DOMAIN 2: KEEP IT CLEAN

Topic: 2.1 Cleanliness and Health Impacts

Knowledge Areas:

- Health effects of dust, allergens, pets and pest excrement
- Contaminants in dust (allergens, dander, lead, chemicals, smoke byproducts)
- Clutter and hoarding impacts
- Risks of antibacterial product overuse

Topic: 2.2 Particle, Dust & Allergen Control

Knowledge Areas:

- Breathable and invisible particles
- Dust mite characteristics and locations
- · Controlling humidity & reducing dust
- Importance of vacuuming, washing,
- Allergen reduction strategies
- Cleanable surfaces (flooring types, back splashes etc)

Topic: 2.3 Cleaning Methods and Considerations

Knowledge Areas:

- Vacuum types and features
- Wet and dry cleaning techniques and frequency
- Product concerns and recommendations
- PPF
- Special cleaning considerations, eg. rodent droppings, lead dust, asbestos, mold

Topic: 2.4 High-Bacteria Areas & Their Relevance

Knowledge Areas:

- Types of bacteria bad (germs) and good bacteria
- Top locations in homes where germs may be found
- Why routine cleaning is critical

Topic: 2.5 Entry Dust Control

Knowledge Areas:

- 4-part strategy to reduce tracked-in dust
- · Benefits of walk-off mats and shoe removal

Topic: 2.6 Air & Mechanical Systems

Knowledge Areas:

- MERV 11–13 filter benefits and limitations
- Mechanical system cleaning guidance
- Importance of sealed ducts

Topic: 2.7 Environmental & Occupant Practices

- Reducing exposure on high-smog or pollen days
- Clutter management, hoarding and organization strategies
- Use of clutter rating tools with clients
- Importance of Cultural sensitivity

DOMAIN 3: KEEP IT DRY

Topic: 3.1 Moisture and Health Impacts

Knowledge Areas:

- Health effects of chronic dampness
- The role of moisture in respiratory illness
- Vulnerable populations

Topic: 3.2 Moisture Sources

Knowledge Areas:

- Exterior Sources:
 - o Bulk water
 - Vapor
 - Airborne droplets
- Interior Sources:
 - Plumbing leaks
 - Occupant behavior eg. cooking, breathing, showers

Topic: 3.3 Moisture Transfer in Building Materials

Knowledge Areas:

- Moisture through porous materials
- Capillary suction
- Crawl space impact

Topic: 3.4 Moisture and Temperature

Knowledge Areas:

- Relative humidity, condensation and dew point
- · Dew point and surface moisture
- Insulation and condensation issues

Topic: 3.5 Mold Growth Factors

Knowledge Areas:

- Mold growth conditions
- Food sources and surfaces
- Dead mold concerns
- Mold misconceptions, and occupant anxiety

Topic: 3.6 Safe Mold Cleanup

- Safe cleanup size (<10 sq ft or 3' x 3')
- Mold cleanup
- EPA multi-step process

Topic: 3.7 Building Moisture Controls

Knowledge Areas:

- Gutters, downspouts, leaks
- Crawl space ground covers
- Grading around foundations
- Impact of air sealing on moisture

Topic: 3.8 Mechanical Moisture Control Systems

Knowledge Areas:

- Ventilation fans and standards
- Dehumidification
- Dryer vent cleaning

Topic: 3.9 Occupant Moisture Control Practices

- Drying spills
- Discarding wet items
- Promoting airflow

DOMAIN 4: KEEP IT PEST-FREE

Topic: 4.1 Pest Indicators & Health Impacts

Knowledge Areas:

- Definition of a pest
- Signs of pest presence
- Pest identification
- Common pest behavior
- Health effects of pests (roaches, rodents, bedbugs)
- Other household pests and unwelcome guests

Topic: 4.2 Integrated Pest Management Principles

Knowledge Areas:

- Pest Management Triangle for Housing concept
- IPM process and steps
- IPM goals and benefits
- Pesticide use reduction

Topic: 4.3 Pesticide Awareness & Monitoring Practices

Knowledge Areas:

- Pesticide definition, application and storage
- Health effects of pesticides
- Labeling requirements, signal words, facts vs. marketing.
- Rodent and insect monitoring tools
- Ineffective, dangerous or misleading products

Topic: 4.4 Effective Pest-Management Methods

Knowledge Areas:

- Roach management
- Rodent management
- · Bedbug management
- Dust mite management

Topic: 4.5 Actions for a Pest-Free Environment

- Pest exclusion strategies
- Humidity control
- Occupant behavior, cleaning habits, storage
- PPE and contamination-prevention practices for home visitors

DOMAIN 5: KEEP IT CONTAMINANT-FREE

Topic: 5.1 Contaminants and Health Impacts

Knowledge Areas:

- Common contaminants in homes
- Health effects of smoke, VOCs, s fine and ultrafine particles (PM2.5, 10)
- Second and third-hand smoke concerns

Topic: 5.2 Sources & Exposure Pathways

Knowledge Areas:

- VOC sources, off gassing and indoor concentrations
- Smoke and particulate exposure (tobacco, vaping cooking, combustion etc.)
- Persistent pollutants (microplastics, PFAS etc.)
- Exposure pathways of contaminants

Topic: 5.3 Product Safety & Ventilation Strategies

Knowledge Areas:

- Strategies to reduce chemical use
- Role of ventilation
- Awareness of outdoor air contaminants and infiltration pathways
- Third-party green certifications

Topic: 5.4 Healthy-Exposure-Reduction Actions

- Low-VOC paints and materials
- Furnace filter replacement
- Safe product disposal
- Issues with Air fresheners, incense, scented cleaners and candles
- · Limited value of indoor air monitors

DOMAIN 6: KEEP IT SAFE

Topic: 6.1 Safety and Health Impacts

Knowledge Areas:

- Preventable injury vs. accident
- · Leading causes of injury deaths
- Vulnerable populations

Topic: 6.2 Poisoning Hazards

Knowledge Areas:

- Common household poisons
- Signal words on product labels
- Safe chemical storage
- Food safety considerations

Topic: 6.3 Fire and CO Safety

Knowledge Areas:

- Placement of smoke/CO alarms
- Fire and burn prevention
- · Space heaters
- Fire safety planning and devices; exits, blankets, ladders

Topic: 6.4 Falls, Tip-Overs & Choking

Knowledge Areas:

- Fall prevention strategies
- Tip-over prevention
- Safe play areas and choking risks
- Safe storage and decluttering

Topic: 6.5 Electrical Safety

Knowledge Areas:

- · GFCIs and circuit safety
- Preventing electrical shock

Topic: 6.6 Safe Access and Mobility

Knowledge Areas:

- Universal design features that enhance safety
- Safe exterior access and emergency egress
- Assistive devices and home retrofits
- Lighting

Topic: 6.7 Additional Safety Items

- Recommended Water heater temperature ranges
- Visible Exterior House Numbers
- · Safety glass and window guards
- Firearm storage safety
- Water safety and home swimming pools
- Intruder deterrence

DOMAIN 7: KEEP IT VENTILATED

Topic: 7.1 Ventilation and Health Impacts

Knowledge Areas:

- Health effects of poor ventilation
- Pollutants reduced by ventilation

Topic: 7.2 Ventilation Principles and Systems

Knowledge Areas:

- Airflow and pressures
- Importance of adequate airflow in tight homes
- Types of mechanical ventilation; supply, exhaust, balanced
- Other exhausting fans; clothes dryers etc
- Importance of proper installation; noise, serviceability, H&S
- Whole house and local ventilation

Topic: 7.3 Combustion By-Product Risks

Knowledge Areas:

- Health effects of CO and NO₂
- Sources of combustion by-products
- · Spillage risks

Topic: 7.4 Filtration & Air Cleaning

Knowledge Areas:

- MERV ratings and installation
- Filter performance factors
- Portable air cleaners: CADR, HEPA filters
- Problems with room purifiers
- DIY Filtration boxes

Topic: 7.5 Airflow Improvements in Homes

- Ventilation Strategies
- Air sealing as control strategy
- Properly sealed and insulated ductwork
- · Occupant education; fan run times, outdoor air

DOMAIN 8: KEEP IT COMFORTABLE

Topic: 8.1 Thermal Comfort and Health Impacts

Knowledge Areas:

- Definition of thermal control
- Health effects of heat/cold exposure
- Vulnerable populations

Topic: 8.2 Heat Transfer & Comfort

Knowledge Areas:

- Heat transfer mechanisms
- Occupant v Building comfort factors
- Climate-zone design factors

Topic: 8.3 Air Sealing & Insulation

Knowledge Areas:

- Role and sequence of air sealing
- Necessity of continuous air barrier & insulation
- Air movement and pollutant control

Topic: 8.4 Energy Insecurity

Knowledge Areas:

- Affordability
- Energy burden
- Power outages

Topic: 8.5 Comfort Strategies

- Impact of insulation and air sealing on comfort
- HVAC systems (sizing, ducts, registers, maintenance etc)
- House as a system and comfort
- · Occupant behavior and education

DOMAIN 9: KEEP IT MAINTAINED

Topic: 9.1 Maintenance Health Impacts and Basics

Knowledge Areas:

- Health effects of poor maintenance
- Vulnerable populations
- Importance of maintenance
- · Link to indoor air quality and contaminant control

Topic: 9.2 Routine Maintenance Needs

Knowledge Areas:

- Inspections, cleaning, repair and replacement
- Building structure (eg roofing) and property
- Systems: HVAC, electrical and plumbing etc

Topic: 9.3 Lead Hazards

Knowledge Areas:

- · Lead and health
- Sources in homes;
 - Lead based paint:
 - RRP Rule requirements,
 - Lead Disclosure Rule
 - Lead water service lines

Topic: 9.4 Asbestos

Knowledge Areas:

- Asbestos and health
- Sources in homes
- Friable materials
- Safe handling guidance

Topic: 9.5 Radon

Knowledge Areas:

- Radon and health
- Radon entry
- Testing and mitigation methods

Topic: 9.6 Sewer Gas

- Sewer gas and health
- Sewer gas entry
- Sources and control of sewer gas

6. Standards of Reference

All BPI exams are based on a mixture of industry practices, axiomatic concepts, and major standards of reference. No singular source exists that could touch upon every aspect of what is considered testable. Conversely, there is no limit to the potential useful material found in print and online.

7. Exam Security

Exams are highly confidential materials. Any attempts to willfully compromise the integrity of the exam, the exam process, or the certificate process shall be taken seriously. Offenders may be prosecuted to the fullest extent of the law. In addition, any certificate credential may be revoked immediately if a breach is proven to have been made by an individual.

8. Granting

In order to receive the HHP Certificate of Knowledge, the candidate must successfully complete and pass the multiple-choice online exam.

8.1 Notification of Exam Results and Issuance of Certificate

If you have successfully passed the HHP exam, the HHP Certificate of Knowledge will be available through your BPI Dashboard. You may select the Print Certificate button and save your certificate to your computer or print it.

9. Surveillance

BPI monitors Certificate Holders to ensure ongoing compliance with the policies and procedures under which the Certificate of Knowledge was granted. A certificate may be withdrawn or revoked if the holder negligently fails to follow the certificate scheme requirements, violates the Code of Ethics, or does not take the corrective actions required by BPI.

10. File Review

If a complaint is received by BPI regarding a certificate holder, BPI's Certification Department will conduct a review of the certificate holder's record. The review of the certificate holder's record includes confirmation that any previous complaints have been resolved.

11. Corrective / Preventative Action

The corrective / preventative action shall include one of the following and is determined on a case-by-case basis at the discretion of BPI:

Level One: Corrective action will be given when the infraction is considered minor in nature. A written warning shall be sent to the Certificate Holder about the nature of the infraction along with the required corrective action. The written warning shall become part of the Certificate Holder's record.

Level Two: Corrective action will be given when the infraction is considered major in nature and requires proof. A written warning is sent to the Certificate Holder about the infraction. The Certificate Holder is required to submit proof, in writing, that the infraction has been corrected. The written warning and response will become part of the Certificate Holder's record.

12. Withdrawal of Certificate of Knowledge

BPI reserves the right, on a case-by-case basis, to withdraw a person's BPI Certificate(s) of Knowledge at its discretion. Reasons for withdrawal of a BPI Certificate(s) of Knowledge include, but are not limited to:

- Failure to take steps to submit the requested information of a corrective action as outlined in Section 12.
- Failure to follow BPI Standards that align with the certificate's Knowledge Areas, when applicable.

In the event that the BPI Healthy Housing Principles (HHP) Certificate of Knowledge is withdrawn; the BPI Manager of Client Relations will review the Certificate Holder's record and send confirmation of the withdrawal within 30 days and provide a written statement in regard to steps that must be taken if the candidate requests the certificate of knowledge be reinstated.

Use of the BPI logo or brand and representation of holding the BPI Healthy Housing Principles (HHP) Certificate of Knowledge must cease immediately if a certificate is withdrawn or revoked.

13. Complaints

BPI recognizes that there are two main types of complaints that may be brought to its attention:

- Complaints regarding BPI and/or its related vendor organization (administrative, testing, Test Center, proctor, etc.)
- Complaints regarding BPI Certified Professionals or BPI Certificate Holders or organizations with BPI Certified Professionals or BPI Certificate Holders on staff

Complaints Process

To file a complaint, the individual must follow the procedures, below:

- 1. Individuals who wish to file a complaint pertaining to any aspect of the certificate of knowledge or testing process, work performed by other BPI Certified Professionals or BPI Certificate Holders, or any other BPI related concerns, please follow the procedures below:
 - a. Submit the Complaint Form via the BPI website
 - Go to www.bpi.org and hover over **About Us** at the top of the page, select **Contact Us**. Enter your information and choose **Complaint Form** from the **Category** dropdown box.
 - b. Send a letter via registered mail to

Building Performance Institute, Inc. Attn: Complaints 63 Putnam Street, Suite 202 Saratoga Springs, NY 12866

- c. Send an email to Complaints@bpi.org
- 2. The request for review must provide specific details for the complaint and any type of documented information that pertains to the situation.
- 3. The review will be carried out on a case-by-case basis by the Quality Assurance (QA) Department. Review results will be forwarded to the Director, who will provide the decision to the complainant, via email, within 30 to 40 days of receiving the complaint.

14. Secondary and Tertiary Appeal Procedures

If BPI receives an appeal to any decision it has made, including a decision on the certificate of knowledge (suspension or otherwise), a resolution for any complaint, or the outcome of a secondary appeal, the person shall be instructed to submit the appeal by the following procedure

*Note: Any staff member that may have worked on the decision-making process for an initial complaint or appeal will not be involved in the decision-making process for any follow-up appeal. Also, appeals cannot be made against any online multiple-choice exam results.

- 1. An appeal must be made within thirty (30) days from the date that the initial outcome of the original complaint or appeal occurred. The request for review may be made in the following manner:
 - a. Submit the Complaint Form via the **BPI** website

Go to www.bpi.org and select **About Us** at the top of the page, then **Contact Us**. Enter your information and choose **Complaint Form** from the **Category** dropdown box.

b. Send a letter via registered mail to

Building Performance Institute, Inc. Attn: Complaints 63 Putnam Street, Suite 202 Saratoga Springs, NY 12866

- c. Send an email to Complaints@bpi.org
- 2. The request for review must provide specific details for the appeal and any type of documented information that pertains to the situation.
- 3. The review will be carried out on a case-by-case basis by the Compliance Department. Review results will be forwarded to the appropriate BPI staff, who will provide the decision to the complainant, via email, within 30 to 40 days of receiving the complaint.
- 4. Decisions made about a tertiary appeal are final.

16. Comments

Submit any comments regarding the certificate exams or processes to Certification@bpi.org.

Terms and Definitions

BPI National Standards – The set of technical protocols and procedures that have been developed through an open, transparent, consensus-based process and are intended to achieve a high quality of residential building performance. BPI is approved by the American National Standards Institute, Inc. (ANSI) as an accredited developer of American National Standards.

Candidate – Applicant who has fulfilled specified prerequisites, allowing his/her participation in the certification process.

Certificate Process – All activities by which a certification body establishes that a person fulfills specified competence requirements, including application, evaluation, decision on certificates, surveillance, and use of certificates and logos/marks.

Certificate Scheme – Specific certificate requirements related to specified categories of persons to which the same particular standards and rules, and the same procedures apply.

Competence – Demonstrated ability to apply knowledge and/or skills and, where relevant, demonstrated personal attributes, as defined in the certificate scheme.

Complaint – Conformity assessment request, by any organization or individual to a certification body, for corrective action relating to the activities of that body or to those of any of its customers.

Evaluation – Process that assesses a person's fulfillment of the requirements of the scheme, leading to a decision on certificate.

Exam – Mechanism that is part of the evaluation, which measures a candidate's competence by one or more means such as online, oral, practical and observational.

Qualification – Demonstration of personal attributes, education, training and/or work experience.

Quality Assurance – The observation techniques and activities used externally by an organization to evaluate the effectiveness of their quality management system and to provide feedback that may result in quality improvements.

Scheme Committee – Group of people chosen by the certification body to provide input, recommendations, guidance, and review of a certificate scheme.

Test Taker – An individual who is engaged in the process of taking an exam.