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# Remote Condition and Maintenance Cost Assessment of the Washington State Art Collection, 2011

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## Project Summary

In 2011, conservator team Peter Malarkey and Jessica Kottke performed a unique assessment of the Washington State Arts Commission's state art collection, one of the largest and oldest collections of public art in the United States. The collection includes 4,500 artworks located at public schools, colleges, universities, and state agencies across Washington. The assessment — of works that range in scale from 2D works on paper to major landscape installations to technology-based artworks — answered the fundamental question: what resources are needed to care for this large, diverse, and geographically spread collection?

The team and Arts Commission agreed that an object-by-object assessment was not presently feasible. Thus the assessment that was carried out applied a combination of statistical analysis and experience-based, subjective reasoning to a statistical subset of the state art collection. When applied to the collection as a whole, it gives the Commission a picture of the needs of its large and vulnerable group of artworks. The resulting report has been the foundation for numerous management decisions and has resulted in additional resources allocated for the collection's care.

## Project Background

Founded in 1974, the tax-funded collection consists of over 4,500 individual artworks by artists of regional and national significance. It is distributed across 36 of 39 Washington counties with artworks sited in public schools, community colleges, universities, and a variety of state agencies. The artworks occur in a range of scales and media including wood, stone, metal, paper and paint-based media, plastic, glass, organic material, and digital technology. Funding for conservation of the collection is capped by the State Legislature at \$100,000 biennially, making care of this diverse collection a particular challenge.

The Commission's collections policies maximize the accessibility and visibility of artworks within Washington's communities and maintain its original mission of conservation and development of the state's artistic resources. In order to operate within the conservation cap and maximize its resources the Commission began, in recent years, strengthening its preventative conservation policies and procedures to more effectively manage the collection.

The development of preventative conservation models and the implementation of a preliminary conservation review during artwork acquisitions have decreased the Commission's reliance on costly, reactive preservation efforts and facilitated the long term success of the collection by increasing supervision, information gathering, and quality control of newly acquired artworks.

To further implement these strategies, the Commission hired conservators Kottke and Malarkey to assess the overall condition of the collection in order to give some idea of what might be needed to perform necessary short term conservation and maintenance and to help develop a realistic budget for ongoing preservation. The assessment that the team developed provides a profile of expected overhead for the

Commission which covers hands-on treatment, administration, and transportation for the artworks based on size, material scope, age, and geographical distribution.

To approximate a cost range for the conservation and maintenance of objects in the collection, the team developed minimum and maximum treatment overheads, in hours, for individual artworks in a sample set of 8% of the collection, or 347 pieces. This was then scaled to represent all 4,500 pieces. Most fact finding for the sample set of artworks was based on individual records in the state's MIMSY database and office documentation and was corroborated by site visits to 28 artworks.

While neither the contract nor the methodology were conceived as a strict statistical cost analysis, the outcome of the process has revealed the extent of overdue conservation and maintenance costs and has provided a useful tool for the Commission's ongoing management and budgeting initiatives.

## Summary of Overheads

To arrive at an overall condition and cost assessment for each piece in the sample set, the team applied current best practices as defined by the AIC and considered basic conservation treatments such as reframing, new vitrines, operational inspections, cleaning, recoating, stabilization, damage repair, and loss compensation.

The base overhead was estimated, not in terms of financial cost, but rather in the potential number of hours expected for treatment, administration, and travel associated with each piece based on its siting and geographic location. This hourly approach provided a basis for applying real-world administrative variables such as inflation, varying contracted professional rates, in-house versus contracted labor, and fluctuating travel factors such as fuel and mileage costs, and the grouping of multiple artworks into a single travel circuit.

To achieve current approximate treatment costs, this hourly basis had rates applied, of \$35/hour for administration and in-house labor, and \$100/hour for contracted labor. Variation factors, described below, were applied to account for large unknowns about the artworks' actual conditions.

The team built a sample set to approximate the overall collection makeup based on eight characteristics with the greatest impact on the durability and condition of the artworks:

- size
- material type
- age
- agency type (i.e. public school, college, university, or state agency)
- geographic location
- portability
- indoor/outdoor siting
- and whether artwork was on view or in storage.

The pieces selected for the sample set also needed to be well described in the database, whose records are not robust due to incomplete reporting during the early years of heavy accessioning by the Commission.

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### Estimating Overhead

The team applied two similar and simple formulas which are distinguished from one another by the application of three distinct variation factors in the second formula.

The first formula was used for estimating minimum overhead for an artwork:

$$\begin{aligned} & (\text{Sales Tax} \times \text{Estimated Treatment Cost}) \\ & + \text{Administration} \\ & + \text{Documentation} \\ & + \text{Travel} \\ & = \text{Estimated Minimum Treatment Cost} \end{aligned}$$

The second formula was used for the maximum estimated overhead for the same artwork:

$$\begin{aligned} & [\text{Sales Tax} \times (\text{Estimated Treatment Cost} \times \text{Risk Factor})] \\ & + [(\text{Administration} + \text{Documentation}) \times \text{Administrative} \\ & \quad \quad \quad \text{Variation Factor}] \\ & + (\text{Travel} \times \text{Travel Variation Factor}) \\ & = \text{Estimated Maximum Treatment Cost} \end{aligned}$$

### Variation Factors

#### Administrative variation

Administrative variation was given an additional 10%, to account for unknowns or administrative time variables such as email accumulation, repeat phone calls, varying paperwork, etc.

#### Travel variation

Travel variation was set at 30%, to account for variations in fuel costs, traffic, road problems, etc. The travel overhead associated with care of the collection is currently estimated at 35% of the total cost, though this would be mitigated by grouping of projects into one trip.

#### Risk variation

The more complicated variation was set for the risk factor. The team defined risk as the amount of potential threat possible for a given piece, based on elements of its construction, its age, its location, and the deaccession history of the agency responsible for the piece, based on failed condition or actual loss.

In order to approximate the amount of potential risk to a piece's ongoing good condition, the team devised a weighted chart where points representing risk could be set for eight criteria. Each criterion was assigned up to 6 possible risk points, with some exclusion possible. For example, an artwork less than 10 years old was denied the highest risk potentials, while an older piece was denied the lowest risk potentials due to the likelihood of some damage or deterioration. Similarly, a piece sited out of doors was denied low risks, based on the overall more rapid deterioration of outdoor pieces, while indoor-sited works were denied the highest risk potential.

For each piece, the total risk points were tallied, and fell among three risk categories based on their sum. The three risk categories were assigned a different variation factor to be added to the base formula. As such, a piece with a risk total of between 8 and 19 was assigned a risk variation of 20%, a piece with a risk total of 20 to 33 was given a variation factor of 40%, and a higher risk-rated piece, of between 34 and 45 was assigned an additional overhead of 60%, or over half, of its minimum estimated treatment overhead.

Each of the 347 pieces in the sample set was rated according to this method and formed the basis of calculating total potential labor, travel, and administrative overheads for the collection as a whole.

### Overhead Calculation Table

On the opposite page is the worksheet the team used to remotely estimate the potential minimum and maximum overheads for treating an artwork. This process incorporated available database information, hard copies of any existing evaluations or treatment records, and subjective thought based on the conservators' experience working with public art and what could be known about the siting of each piece.

The upper table consists of a conservative estimate, in hours, to determine a piece's minimum expectable treatment time, which served as a base. The lower table was used for risk calculation and was applied to the minimum overhead, to establish a maximum expectable treatment overhead computed in hours. The section on the following page covers administrative and travel costs.

Indoor siting was permitted less potential risk than outdoor siting, to reflect deterioration from environmental elements.

Material risk was based on the inherent fragility of a given artwork's medium or construction.

The age of the artwork had corresponding risk possibilities, in ascending risk based on age.

Being off view meant that the piece was either in storage at a Commission facility (minimum risk) or that it was either damaged beyond exhibitable condition, or potentially misplaced within the site.

Information quality reflected the amplitude of risk that could be applied based on how much guesswork about condition was actually needed—the less knowledge about a piece, the greater assumed risk.

Complexity refers to moving parts or variable components, such as mixed media or electronic pieces.

Portability refers to the possibility that the piece has been relocated to a more vulnerable position within the site, or has potentially been misplaced.

The four agency categories refer to the condition-based deaccession histories of the agencies, and the likelihood that a piece's condition had been correspondingly compromised.

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Example estimate for: George Flett, *Plateau Traditions*, Acrylic Paint on Cotton Canvas, 2003.  
Location: Washington State University, Pullman, WA

Minimum Treatment Estimate							Subtotal
Location related work including setup and takedown							0.5
Stabilize							
Clean object: surface. Work Speed: (eg 4 sqft/hr)							5
Clean object: abrasions							1
Structural damage repair							
Loss compensation, replace parts							1
New coating							
Conservation Materials							
Framing/vitrine without UV							6
Framing/vitrine with UV							
Add UV plex							0.2
<b>Subtotal</b>							<b>13.5</b>
Risk Factor							
Relative scale of 1 to 6 (1 is least risk and 6 is highest risk)							
Risk Variable	1	2	3	4	5	6	Subtotal
Indoor		2					2
Outdoor							0
Material			3				3
Age: 0 to 9	1						1
Age: 10 to 19							0
Age: '20 to '29							0
Age: '30+							0
Off view							0
Information quality: No idea							0
Information quality: Some idea			3				3
Information quality: Some detail							0
Information quality: Clear							0
Complexity		2					2
Portability			3				3
Agency: Public Schools							0
Agency: Colleges							0
Agency: Universities	1						1
Agency: State Agencies							0
<b>Total Risk Value (9 to 46)</b>							<b>15</b>
<b>Risk Factor</b>							<b>1.2</b>
(Low Risk Factor: 8 to 20 = 1.2) (Medium Risk Factor: 21 to 33 = 1.4) (High Risk Factor: 34 to 46 = 1.6)							
<b>Sales Tax</b>							<b>1.086</b>

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<b>Administration</b>		<b>Subtotal</b>
Reports		1
Photodocumentation		0.5
MIMSY data entry		1
Communication		1
Variation factor	1.1	0.35
<b>Total</b>		<b>3.85</b>
<b>Travel</b>		<b>Subtotal</b>
Travel staff 1		19.5
Travel Staff 2, if any, based on size		
Lodging		
Truck rental for pieces over 48" in any one length		10
Per diem		3
Variation factor	1.3	9.75
<b>Total</b>		<b>42.25</b>
<b>Estimated Cost</b>		<b>63.69</b>

### Site Visits

The team visited 28 different artworks at 12 locations, located in each of three different travel radii representing 2 hour, 4 hour, and 6 hour one-way trips from the administrative center.

Before visiting each artwork at the sites, the conservators estimated the amount of treatment time for each piece according to remotely available information and using the worksheet shown above. On the actual site visits the artworks were observed and estimated based on their true conditions and environments. The process provided a comparison between the remotely estimated and actual artwork conditions, by verifying the pertinence of the actual estimating criteria, and by giving a basis for the weighting of the risk fields.

The site visits also showed the variety of conditions and ways the artworks were being used, or in some cases, not used, as in the case of a group of digital/interactive artworks that were being stored with spare furniture and were no longer operable or serving their intended function as artworks.

### Conclusions

The assessment report was not intended as a curatorial tool, but did include general recommendations for improved collection maintenance. Based on the analysis, the team was able to substantiate the following observations for administrative purposes:

- The collection is historically under-resourced.
- Overdue collection care compounds conservation costs.
- Collection care is enhanced by communication with centralized partner agency administrators (e.g. school districts), rather than onsite art location staff (e.g. school staff). This method improves both institutional memory and agency accountability.
  - Public schools and community and technical colleges represent the highest risk agencies.
  - Maintenance costs for larger, three-dimensional pieces are lower, per acquisition dollar, than for small, two-dimensional pieces.
  - Obligations by partner agencies regarding site supervision and inventory reporting are generally underperformed.

Conclusions the team provided to the Commission were that the long-term success of preserving state-owned artwork depends upon improved funding for all activities pertaining to the preservation of the collection, improved co-stewardship between the Commission and partner agencies, and enhanced enforcement of obligations and agreements by partner agencies. In addition it was demonstrated that the Commission needed to increase hands-on professional staff time for travel, inventory, and care of artworks.

A second contractor built upon these conclusions with a focus on management and curatorial recommendations. Since the completion of this and the second report, the Commission has advanced its care of the collection in a number of ways: the Commission's Conservation Technician position has increased from part to full time; the related travel and tool/equipment budgets have increased; collections staff now has a dedicated workspace space for conservation, mounting, and repair projects; the first comprehensive physical inventory of the collection is in the planning stages; the deaccession policy has been changed to support the formation of a standing deaccession committee; condition questions and response times for the regular electronic inventory have been improved; warrantee periods for newly acquired artworks have been increased; collection records are being prepared for a web-based searchable database, improving access to information on a year round basis for the public and partner agencies.

These accomplishments—while modest in the face of a collection of 4,500 objects spread across nearly 70,000 square miles—are all the more noteworthy given the economic recession and its effects on state government. The Commission as a whole experienced a 55% cut in state funds since 2009. Demonstrating the need for a greater investment in the State Art Collection and its care will continue to be a priority for collections staff, agency leadership, and board as they navigate changing standards in care and the very active public environments in which the artworks reside.