# Actuarial Discussions

## Morrow County Retirement Plan

Brent Langland, ASA, EA, MAAA

FEBRUARY 1, 2023

Milliman

# Agenda

- Overview of Morrow County Retirement Plan
- Milliman’s services and roles
- Review July 1, 2021 valuation results
- Potential assumption changes for July 1, 2022 valuation
- Adoption of a formal Funding Policy
- Questions

# Overview of Morrow County Retirement Plan

- The Morrow County Retirement Plan is a Defined Benefits (DB) retirement plan
  - At retirement, members receive an annuity benefit for the rest of their lives
  - Assets for all members combined in a Trust and used to pay benefits as they are due
  - Benefits are generally funded as they are earned during the member's employment
    - Employee 6% salary reduction contributions fund the account balance
    - County additional contributions fund the rest, including unfunded accrued liabilities
  - Participation is closed to new members hired after June 30, 2020
- Benefit consists of account balance and annuity benefit payable at retirement
  - Account balance receives 6% salary contributions and 6% interest
  - Annuity benefit based on years of service and final average pay
  - Account balance partially funds annuity benefit

# Overview of Morrow County Retirement Plan

- Different Benefit formulas for General Service and Public Safety employees
  - General Service = 2.4% of final average pay
  - Public Safety = 3.0% of final average pay
- Benefit reduced for early retirement
  - Unreduced benefits at age 60 for General Service
  - Unreduced benefits at age 55 for Public Safety
- Annual Cost of Living Adjustment for in-pay annuity benefits based on inflation index (maximum 2% per year)
- Members are 100% vested after 5 years of service
  - Account balance is always 100% vested
  - Non-retired, terminated vested members must keep their account balance in the Plan in order to receive annuity benefit at retirement age

# Overview of Morrow County Retirement Plan

- Additional benefits
  - Benefits upon termination, disability, or preretirement death
  - $60 Supplemental annuity benefit if more than 8 years of service
  - Unused sick leave lump sum benefit

# Milliman's Services and Roles

- Milliman has served the County since at least the early 1980's
- Lead Consultant Brent Langland, ASA EA MAAA
  - 16 years of experience (all with Milliman)
  - Public sector issues expertise
  - Lead actuary for retiree medical liability valuations for 100+ Oregon public sector employers
- Annual Actuarial Valuation Report
  - Calculate Plan liabilities and funded status
  - Simple projection of future funded status
  - Actuarially determined contribution rate
  - Governmental accounting disclosures under GASB 67/68

# Milliman's Services and Roles

- Annual Member Benefit Statements
  - Active employees and non-retired terminated employees with vested benefit or account balance
  - Current accrued annuity benefit and account balance
  - Simple projection of annuity benefit at unreduced early retirement age
- Administrative support
  - Retirement calculations and estimates
    - Election and payment forms
  - QDRO calculations and other special cases
  - Amendment review
  - Questions from the County and members

# Milliman's Services and Roles

- Morrow County is the legally defined "Plan Administrator" and "Plan Sponsor"
  - Required to act in member's best interest in administration of the Plan (fiduciary duty)
  - Ultimately responsible to pay promised benefits to members on time
  - Authority to delegate some functions and responsibilities to third-parties
- Milliman's role has historically been actuarial consultant and administrative support
  - Milliman offers comprehensive third-party administrative services
  - Size of Plan, closed status, historical relationship between County employees and Plan members, and implementation costs should be considered

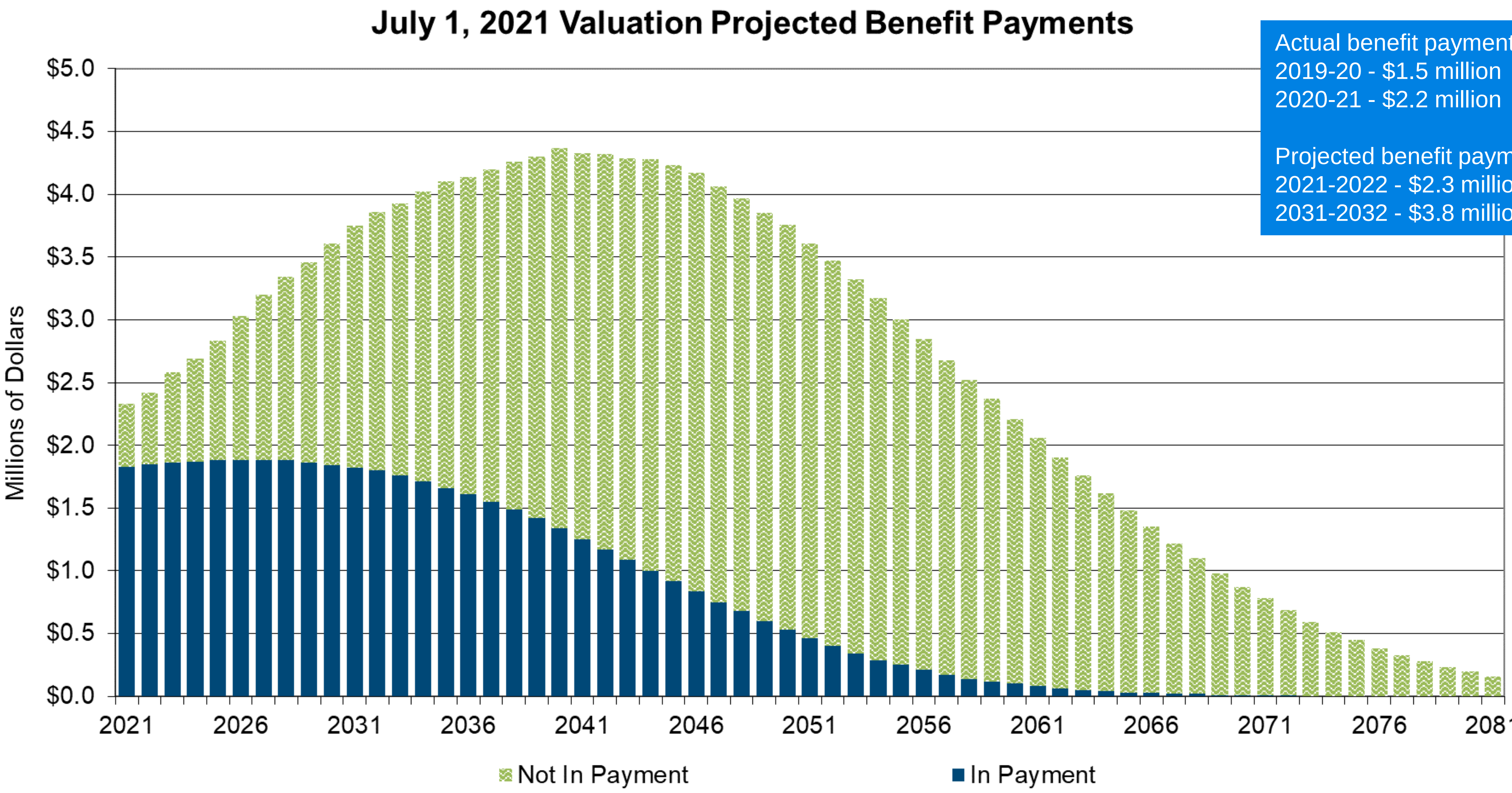
# July 1, 2020 and July 1, 2021 Valuation Results

| ($ in millions) | Actuarial Valuation For Plan Year Beginning | |
|---|---|---|
| | July 1, 2020 | July 1, 2021 |
| **Actuarial Accrued Liability** | $39.9 | $42.1 |
| **Assets** | | |
| Market Value | 27.0 | 34.5 |
| Actuarial Value (AVA) | 27.9 | 30.6 |
| **Unfunded Actuarial Accrued Liability (UAAL)** | 12.0 | 11.5 |
| **Funded Percent (AVA)** | 70% | 73% |
| **Actuarially Determined Contribution Rate** | | |
| Normal Cost | $1.02 | $0.91 |
| Expense Assumption | 0.05 | 0.05 |
| Amortization of UAAL | 1.01 | 1.02 |
| Total Actuarially Calculated Contribution | 2.07 | 1.97 |
| Expected Covered Base Payroll | 6.7 | 6.2 |
| Actuarially Calculated Contribution Rate (% of Base Pay) | 31.0% | 31.5% |

# July 1, 2020 and July 1, 2021 Valuation Results

| *($ in millions)* | **Actuarial Valuation For Plan Year Beginning** | |
|---|---|---|
| | **July 1, 2020** | **July 1, 2021** |
| **GASB 67 and 68 Disclosure Results** | | |
| Discount Rate | 7.0% | 7.0% |
| | | |
| Total Pension Liability (Actuarial Accrued Liability - AL) | $39.9 | $42.1 |
| Fiduciary Net Position (Market Value of Assets - MVA) | 27.0 | 34.5 |
| Net Pension Liability (AL – MVA) | 12.9 | 7.6 |
| | | |
| Pension Expense | 2.9 | 1.5 |
| | | |
| Deferred (Inflow) of Resources | (0.0) | (3.9) |
| Deferred Outflow of Resource | 1.5 | 0.7 |

# Projected Benefit Payments




Actual benefit payments:
2019-20 - $1.5 million
2020-21 - $2.2 million

Projected benefit payments:
2021-2022 - $2.3 million
2031-2032 - $3.8 million

# Actuarially Determined Contribution

- The Plan's Actuarially Determined Contribution consists of three components
  1. Normal Cost (the cost of benefits earned in the next plan year)
     - Partially funded by employee salary reduction pick-up 6% contribution
  2. Provision for non-investment expenses paid from the Plan
     - Currently assume $45,000 per year
  3. Amortization of the Plan's Unfunded Actuarial Accrued Liability (UAAL)
     - Currently amortization period is 20 years
- The Actuarially Determined Contribution is also converted into a percent of covered payroll based on the expected base pay in the next year

# Actuarially Determined Contribution

| | | |
|---|---|---|
| Normal Cost | $908,144 | 14.5% |
| Expense, Mid-Year | 45,000 | 0.7% |
| Amortization of UAAL | 1,016,622 | 16.3% |
| Total Actuarially Calculated Contribution | $1,969,766 | 31.5% |
| Expected Covered Base Payroll | $6,249,435 | |

- Total Actuarially Determined Contribution rate is 31.5%
  - Employee Salary Reduction Pick-Up Contribution = 6%
  - County Additional Normal Cost Contribution = 8.5%
  - County UAAL + Expense Contribution = 17.0% or $1,061,622

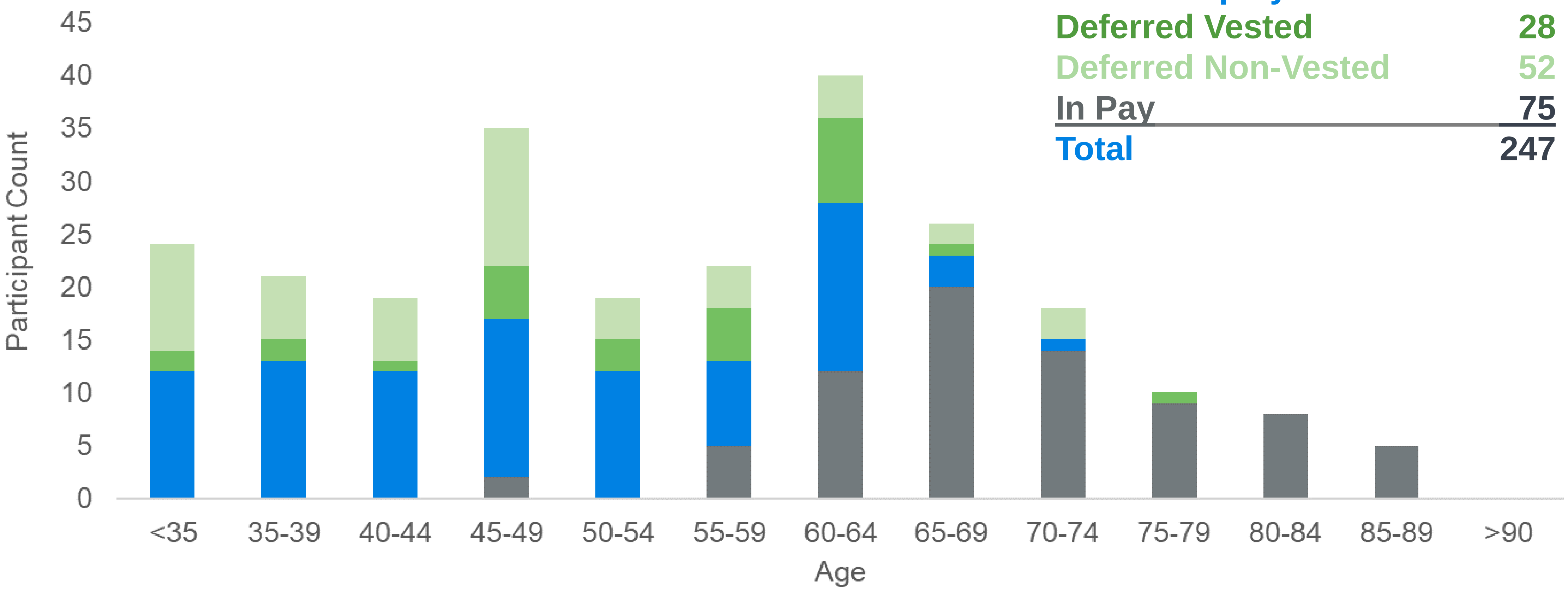
# Member Statistics

| | July 1, 2020 | July 1, 2021 |
|---|---|---|
| Retirees and Beneficiaries | 68 | 75 |
| Total Monthly Benefit Paid From Trust* | $126,434 | $152,746 |
| Vested Terminated Members | 25 | 28 |
| Average Accrued Monthly Benefit | $1,172 | $1,371 |
| Nonvested Terminated with Account Balances | 52 | 52 |
| Total Account Balances | $200,080 | $209,720 |
| Active Members | 108 | 92 |
| Average Salary Rate | $61,470 | $64,844 |
| Average Age | 46.9 | 46.9 |
| Average Years of Membership | 9.1 | 9.4 |
| Covered Base Pay | $6,684,725 | $6,249,435 |
| Total Members | 253 | 247 |

** Includes $60 Supplemental benefits and excludes monthly benefits paid from previously purchased annuities.*

# Demographic Profile as of July 1, 2021

| | |
|---|---|
| Active Employees | 92 |
| Deferred Vested | 28 |
| Deferred Non-Vested | 52 |
| In Pay | 75 |
| Total | 247 |



# Potential Assumption Changes for July 1, 2022 Valuation

- Valuation results are based on actuarial assumptions and methods chosen by County
  - Demographic assumptions (retirement, termination, life expectancy, etc.)
  - Long-term rate of return on Plan assets assumption
    - Expected return for calculation of smoothed actuarial value of assets
    - Discount rate for calculation of present value of projected benefits (actuarial accrued liability)
  - Actuarial cost method
  - Amortization method for unfunded actuarial accrued liability
- Most assumptions based on actual historical and expected future experience
- As part of the annual valuation process, Milliman reviews actuarial assumptions

# Potential Assumption Changes for July 1, 2022 Valuation

- The County has final authority over the selection of actuarial assumptions and methods
  - Actuarial standards of practice (ASOPs) require us to disclose whether the chosen assumptions are reasonable
  - ASOPs also require discussion or disclosure of results using different assumptions (low-default risk discount rate)

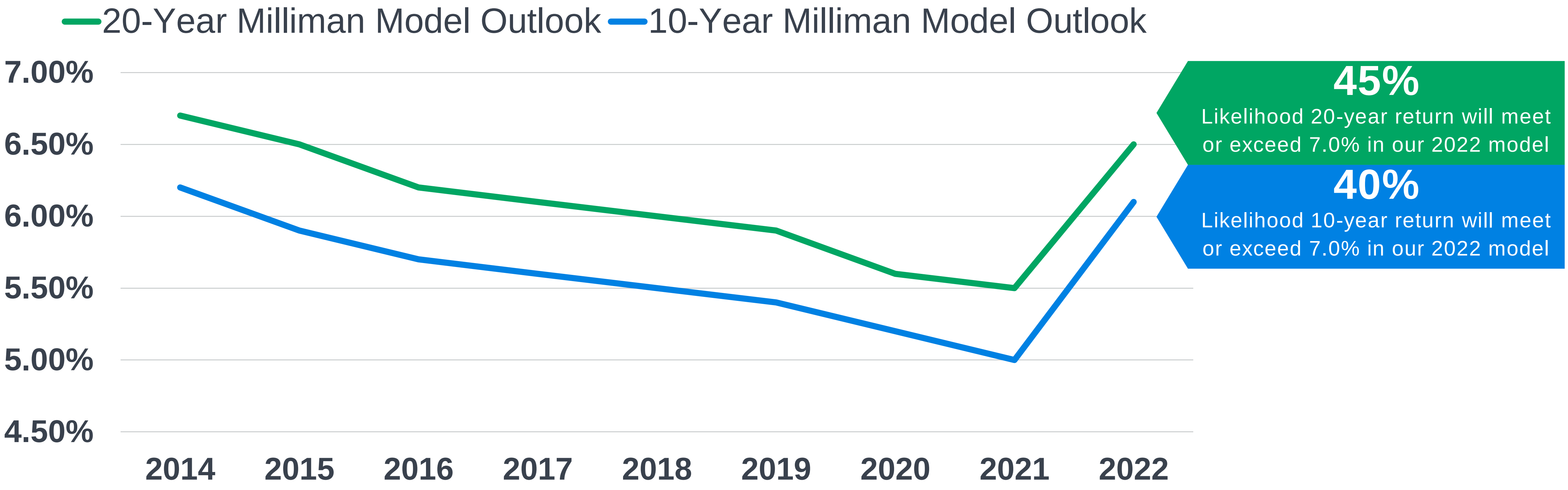
# Potential Assumption Changes for July 1, 2022 Valuation
## Assumed Long-Term Rate of Return

- Assumed long-term rate of return chosen by the County and is used to discount projected benefit payments and calculate liabilities
- Currently 7.0%; last changed in 2015 (reduced from 7.5%)
  - Oregon PERS assumption for December 31, 2020 valuation is 6.9% (reduced from 7.2% used for December 31, 2018 valuation)
- Assumption should reflect the Plan's asset allocation and forward-looking expectations of capital markets
- For the period 2015-2021, Milliman's model of capital market rate of return expectations has decreased, but increased in 2022 due to rising interest rates

# Potential Assumption Changes for July 1, 2022 Valuation

## Assumed Long-Term Rate of Return

Based on model allocation (55%/15% US/non-US equity, 20% US fixed income, 10% other)
Long-term forward-looking average return assumption from most recent actuarial valuation: **7.0%**



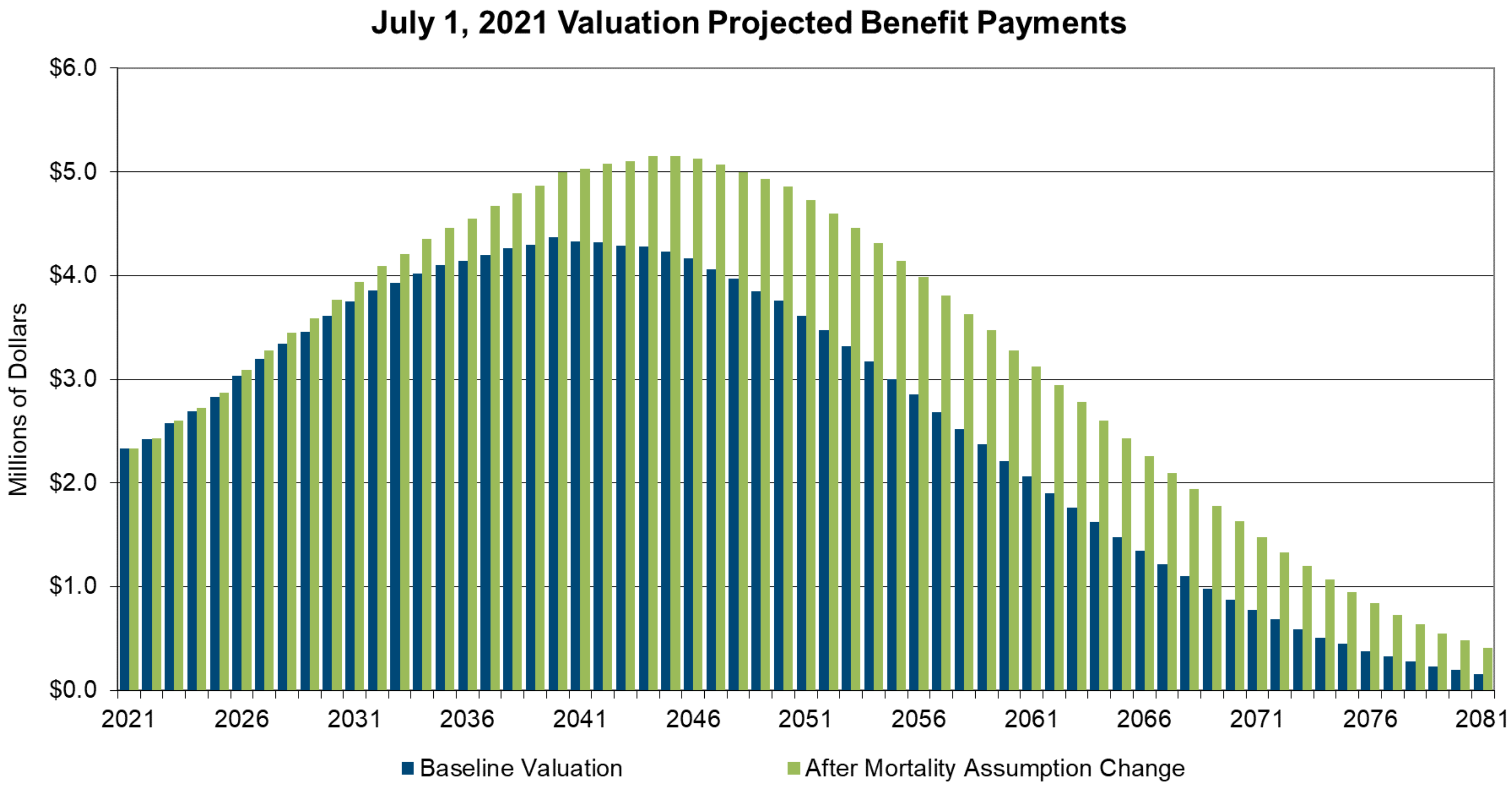
# Potential Assumption Changes for July 1, 2022 Valuation
## Life Expectancy

- Assumed life expectancy chosen by the County and is used to project how long Plan members will live and receive benefit payments after retirement
- Current assumption was chosen in 2015 and was similar to the assumption used by Oregon PERS at that time
  - Unlike Oregon PERS, the Plan's assumption did not include an assumption that life expectancy will increase in future years
- Oregon PERS assumed life expectancy in most recent valuation (December 31, 2020) updated to reflect latest experience
  - Separate tables for Public Safety and General Service
  - Project improvement to life expectancy based on 60-year average annual improvement from Social Security mortality experience
- The Plan does not have enough participants to perform a credible study based on the Plan's own experience
  - Oregon PERS assumption is based on experience studies every two years

# Potential Impact of Assumption Changes

- We recommend updating the Plan's life expectancy assumption
  - Increase liabilities and contributions due to longer expected lifetime of benefit payments
- We also recommend lowering the long-term assumed rate of return assumption
  - Increase liabilities and contributions due to lower discount rate and lower asset returns
- The estimated impact on the Plan's actuarially determined contribution (based on the July 1, 2021 valuation results)
  - Updating the life expectancy assumption to the most recent Oregon PERS assumption, including projected increases in life expectancy
    - Liabilities increase $4.5 million to $46.6
    - Funded status decreases from 73% to 66%
    - Contribution increases $0.42 million to $2.39 million or about 6.8% of covered base pay to 38.3%
  - Updating life expectancy *and* lowering the rate of return assumption to 6.5%
    - Liabilities increase $7.5 million to $49.6 million
    - Funded status decreases from 73% to 62%
    - Contribution increases $0.69 million to $2.66 million or about 11.1% of covered base pay to 42.6%

# Potential Impact of Assumption Changes



# Potential Impact of Assumption Changes

- Impact on valuation results may be different with the July 1, 2022 actuarial valuation results
- We recognize a large increase in the contribution rate due to any assumption changes would likely be difficult to budget
- Potential ways to reduce the impact or phase-in the increase:
  - Reset prior amortization bases and amortize initial base over a longer period (subsequent amortization bases amortized over 20 years)
  - Adopt a funding policy that phases-in the higher contribution rates (similar to the collar used by Oregon PERS)
- We can discuss other options for updating the assumptions, the impact of different assumption changes, and potential ways to reduce the impact of any cost increases with the preliminary July 1, 2022 actuarial valuation results

# Adoption of a Formal Funding Policy

- We understand the County does not have a formal written Funding Policy to guide contribution and other funding decisions for the Morrow County Retirement Plan
  - For the valuation, Milliman uses methods and assumptions communicated to us informally
- A formal Funding Policy is not required, but having a formal written document would
  - Document the County's decisions regarding actuarial methods and assumptions
  - Document how the County determines the annual contribution level
    - Could remove subjectivity from annual funding level decisions
    - Language to retain flexibility
  - Document the County's funding goals for the Retirement Plan

# Adoption of a Formal Funding Policy

- There are changes in the last several years that lead us to recommend adopting a formal funding policy now
  - The plan freeze means the number of active members and their covered payroll is expected to decrease in future years
    - How will the County fund the Plan as the proportion of employees covered by the Plan decreases, but unfunded liabilities remain?
    - What is the best way for the County to regularly contribute to the Plan as the calculated contribution rate as a percentage of covered payroll increases?
  - GASB and new Actuarial Standards of Practice (ASOP) disclosure requirements strongly recommend adopting a formal funding policy
  - Increasing scrutiny of retirement plan funded status by third parties (regulators, courts, banks, unions, and the public)
- We recommend legal counsel involvement in the review and approval of any formal written Funding Policy

# Adoption of a Formal Funding Policy

- Milliman has prepared a DRAFT Funding Policy for your consideration
  - Based on our understanding of current funding policy methods and assumptions
  - Relatively basic, best viewed as a “starting point”
- Potential changes or additions that could be considered
  - Reflect any changes to amortization policy adopted to reduce the impact of assumption changes
    - Reset amortization bases or initial longer amortization period
  - Reflect any changes to amortization policy to better reflect the plan freeze
    - Level-dollar amortization schedule instead of increasing amortization payments (level percent of pay)
  - Reflect any changes to the County’s contribution policy
    - Normal cost percent of pay contribution plus level-dollar amortization of UAAL contribution
    - Collaring or phase-in contribution level (automatic “ratcheting”)
  - Add language to allow flexibility for extraordinary purposes
  - Add language stating the County’s funding goals

# Thank you

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# Certification

Milliman has prepared this presentation solely for the internal business use of the Morrow County. Determinations for purposes other than as stated may be significantly different from the results contained in this presentation. Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third-party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a Release.

In preparing this report, we relied, without audit, on member data, financial information and plan provisions supplied by Morrow County, the Plan’s investment manager, and the Plan’s attorney. We found this information to be reasonably consistent and comparable with information used for other purposes. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

No third-party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan’s funded status); and changes in plan provisions or applicable law.

Except as otherwise indicated, the assumptions, plan provisions, actuarial methods, explanatory notes, including statements of reliance and limitations on use reflected in our July 1, 2021 Actuarial Valuation Report still apply. The valuation results were developed using models intended for valuations that use standard actuarial techniques. Please refer to that report.

These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions. We have not explored any legal issues with respect to the proposed plan changes. We are not attorneys and cannot give legal advice on such issues. We suggest that you review this proposal with counsel.

The consultants who worked on this assignment are retirement actuaries. We are not attorneys and cannot give legal advice on such issues. We have not explored any legal issues with respect to the proposed plan changes. We suggest that you review any proposed changes with counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the *Code of Professional Conduct* and *Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States* promulgated by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

# Actuarial Basis

- Unless stated otherwise, all assumptions, methods, data, and plan provisions reflect in this analysis are as described in the July 1, 2021 Actuarial Valuation Report
  - Discount Rate and Assumed Long-Term Rate of Return on Assets: 7%
  - Mortality Assumption:
    - The probabilities of mortality for retired members is assumed to follow a blended RP-2000 table; 25% blue collar/ 75% white collar, set back 12 months for males, no setback for females.
  - Salary Scale: Based on years of service; ranges from 7.5% for 0-1 years of service to 3.75% for 10+ years of service
  - Cost of Living Increases (COLA): 2.0% per year
  - Actuarial Cost Method: Individual entry age normal, level percent of pay.
  - Asset Method: 5-year smoothed market value of assets
  - Amortization Method: Close, 20 years on a level percent of projected covered payroll basis, assuming annual future covered payroll increases of 2.75% per year.

# Morrow County Retirement Plan
# Funding Policy

## Background

The Morrow County Retirement Plan Trust is a tax exempt trust which holds assets and funds benefits under the Morrow County Retirement Plan (Retirement Plan or Plan), a governmental defined benefit plan. The Plan's assets are held for the exclusive benefit of members and beneficiaries under the terms of the retirement plan established by Morrow County, Oregon (the County), and cannot be used to pay any benefits or expenses of any other retirement plan or trust. The benefits are funded by employer and employee contributions, and earnings from Retirement Plan investments.

## Purpose

The purpose of this Funding Policy is to document the primary components of the County's current funding policy. The County may choose to modify the Funding Policy at any time.

## Overview

The County intends to systematically fund the Plan's liabilities on a sound actuarial basis. The calculation of the actuarially determined contribution requirements is based upon the following methods:

- Actuarial Cost Method
- Asset Valuation Method
- Amortization Method

The methods chosen by the County are detailed below.

## Actuarial Cost Method

The Actuarial Cost Method is the method used to allocate the pension costs (and contributions) over an employee's working career. The policy objective is that each member's benefit should be fully funded under a reasonable allocation method by the expected retirement date. Benefit costs should be determined as a level percentage of compensation and include expected income adjustments. The Actuarial Cost Method used to determine the Plan's funding requirements shall be the **Entry Age Normal (level percentage of payroll)** method.

## Asset Valuation Method

The Asset Valuation Method is the method used to develop the Plan's Actuarial Value of Asset's, which is the asset value used to determine the Plan's funding requirements. For this purpose, the Plan's assets are determined using a 5-year smoothed market value with phase-in as described in section 3.16 of the Internal Revenue Service Revenue Procedure 2000-40. Under this method, investment gains and losses are recognized gradually over 5 years. The resulting Actuarial Value of Assets is limited to be between 80% and 120% of the Market Value of Assets.

## Amortization Method

The Amortization Method refers to the length of time and structure of the payments required to systematically fund accrued benefits that exceed the Actuarial Value of Assets (also called the unfunded liability). The Plan's amortization policy will have an overall goal of stable costs and intergenerational equity. The Amortization Method incorporates the following components:

| | |
|---|---|
| *"Open" or "Closed" Period:* | Changes in the Plan's unfunded liability will be amortized over a **closed amortization period** (rather than utilizing an open "rolling" amortization period). |
| *Amortization Period:* | Emerging amortization bases will be amortized over 20 years. |
| *Amortization Payment Basis:* | When developing the amortization schedule for a given amortization base, payments will be assumed to increase at 2.75% annually. |

## Actuarially Determined Contribution

The previously described methods are used to calculate the Plan's actuarially determined contribution (ADC), which consists of three components:

- Normal cost (the cost of benefit accruals allocated to the next plan year)
- Amortization of the Plan's unfunded liability
- Provision for non-investment expenses paid from the Trust

The ADC will be presented as the actuarially equivalent:

- Contribution Rate as a Percent of Covered Base Compensation: This rate is calculated by dividing the ADC by the base compensation for covered active population.

The actuarially determined contribution is assumed payable mid-year with a one-year delay after the valuation date.

## Frequency of Calculation

The calculation of the actuarially determined contribution requirement based upon the above methods will be completed annually.

## Actuarial Assumptions

In addition to the methods outlined in this document, the Plan's funding requirements for a given year are highly dependent on the actuarial assumptions used to determine the Plan's pension liability. The assumptions used for this purpose will be reviewed annually as part of annual actuarial valuation process. The County has ultimate authority over assumptions used to determine the Plan's funding requirements.

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July 21, 2022

Morrow County
Attn: Chair Jim Doherty
Morrow County
P.O. Box 788
Heppner, Oregon 97836

**Re: Morrow County Retirement Plan**
**July 1, 2021 Actuarial Valuation**

Dear Chair Doherty:

Enclosed is the July 1, 2021 Actuarial Valuation of the Morrow County Retirement Plan.

The total actuarially determined contribution rate as a percentage of covered base salary for the plan year beginning July 1, 2022 increased from 31.0% to 31.5%. The increase was driven by the lower covered salary due to the Plan freeze and decreasing number of active members.

The actuarially determined contribution on a dollar basis decreased from about $2.07 million to $1.97 million. The decrease is mostly due to the significantly invest returns for the 2020-2021 plan year.

This report includes exhibits based on our understanding of the accounting disclosure and financial reporting requirements of Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 for the Morrow County Retirement Plan. This information is for the fiscal year ending June 30, 2022.

I would be happy to meet with you to discuss our findings. If you have any questions or if you need additional copies of the report, please let me know.

Sincerely,

Brent J. Langland, ASA, EA, MAAA
Consulting Actuary

BJL:wp
encl.

cc: Kevin Ince
Lindsay Grogan

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**MORROW COUNTY**
**RETIREMENT PLAN**

**ACTUARIAL VALUATION**
**as of July 1, 2021**

*Prepared by*

Brent J. Langland, ASA, EA, MAAA
Consulting Actuary

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July 21, 2022

Morrow County
Attn: Chair Jim Doherty
P.O. Box 788
Heppner, Oregon 97836

**Re: Morrow County Retirement Plan**
**July 1, 2021 Actuarial Valuation**

Dear Chair Doherty:

As part of our engagement with Morrow County, we performed an actuarial valuation of the Morrow County Retirement Plan as of July 1, 2021. Our findings are set forth in this report. This report reflects our understanding of the benefit provisions in effect as of July 1, 2021.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the County, the Plan's investment manager, and the Plan's attorney. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the Plan.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement. The County has the final decision regarding the appropriateness of the assumptions and actuarial cost methods and is solely responsible for communicating to Milliman any changes required thereto.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

The valuation results were developed using models intended for valuations that use standard actuarial techniques. Actuarial computations presented in this report are for purposes of determining the Plan’s funded status and the actuarially determined contribution rate. Actuarial computations presented in this report under GASB Statements No. 67 and 68 are for purposes of assisting the County in fulfilling financial accounting and reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan’s funding requirements and goals, the Plan provisions described in Appendix B of this report, and of GASB Statements No. 67 and 68. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman’s work is prepared solely for the use and benefit of Morrow County. To the extent that Milliman’s work is not subject to disclosure under applicable public records laws, Milliman’s work may not be provided to third parties without Milliman’s prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s):

(a) The County may provide a copy of Milliman’s work, in its entirety to the Plan’s professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman’s work for any purpose other than to benefit the Plan.

(b) The County may provide a copy of Milliman’s work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman’s work product should rely upon Milliman’s work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are retirement actuaries. Milliman’s advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuary is independent of the plan sponsor. I am not aware of any relationship that would impair the objectivity of my work.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. I am a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Respectfully submitted,

Brent J. Langland

Brent J. Langland, ASA, EA, MAAA
Consulting Actuary

BJL:wp

**MORROW COUNTY**
**RETIREMENT PLAN**

**ACTUARIAL VALUATION**
**As of July 1, 2021**

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**MORROW COUNTY**
**RETIREMENT PLAN**

## SUMMARY OF THE FINDINGS

### Purpose

This report presents the results of our actuarial valuation of the benefits in effect under the Morrow County Retirement Plan as of July 1, 2021. The purpose of this report is to:

- Determine the funded status of the Plan as of July 1, 2021
- Calculate the actuarially determined contribution rate for the fiscal year beginning July 1, 2022 based on the actuarial cost method and assumptions described in this report
- Provide disclosure information relating to the Plan as required by the Government Accounting Standards Board.

This section of the report summarizes significant results and compares them with last year's results. The following section discusses various aspects of the actuarial valuation followed by tables presenting the detailed results. The appendices at the end of the report summarize the actuarial assumptions and methods, plan provisions, member information as of July 1, 2021 used in this report, and describes some of the most significant risks that could impact the Plan's immediate and future funded status.

### Actuarial Assumptions and Methods

All of the calculations in this report are based on certain assumptions regarding the future experience of the Plan. These assumptions are summarized in Appendix A of this valuation report, along with a description of the actuarial methods used to determine the Plan's costs. There were no assumption or method changes since the prior valuation.

### Plan Benefits Valued

Appendix B of this report contains a summary of the plan provisions in effect on July 1, 2021 upon which this valuation is based. There were no changes in the Plan provisions since the prior valuation. The Second Amendment to the 2015 Restatement that froze participation in the Plan effective June 30, 2020 was reflected in the July 1, 2020 valuation.

### Actuarial Accrued Liability and Funded Ratio

A summary of the Plan's funded ratio and unfunded actuarial accrued liability for the last two valuations is shown below.

**FUNDED RATIO AND UNFUNDED ACTUARIAL ACCRUED LIABILITY**

| | July 1, 2020 | July 1, 2021 |
|---|---|---|
| Actuarial Accrued Liability | $ 39,927,493 | $ 42,115,987 |
| Actuarial Value of Assets | 27,913,818 | 30,612,135 |
| Unfunded Actuarial Accrued Liability | $ 12,013,675 | $ 11,503,852 |
| Funded Ratio | 70% | 73% |

### Actuarially Determined Contribution Rate

The Plan's actuarially determined contribution (ADC) consists of three components:

- Normal cost (the cost of benefits allocated to the next plan year)
- Amortization of the Plan's unfunded actuarial accrued liability (UAAL)
- Provision for non-investment expenses paid from Plan assets

The ADC is divided by the total base pay of covered active members to calculate a contribution rate that is a percentage of covered base pay.

These components are shown below, together with the comparable figures from a year earlier:

**ACTUARIALLY DETERMINED CONTRIBUTION RATE**

| | July 1, 2020 | July 1, 2021 |
|---|---|---|
| Normal Cost at Mid-Year | $1,016,318 | $908,144 |
| Amortization of Unfunded Actuarial Accrued Liability | 1,011,397 | 1,016,622 |
| Allowance for Administrative Expense | 45,000 | 45,000 |
| Total Actuarially Determined Contribution | $ 2,072,715 | $ 1,969,766 |
| Covered Base Pay | $ 6,684,725 | $ 6,249,435 |
| Actuarially Determined Contribution Rate (as a % of covered base pay) | 31.0% | 31.5% |

As shown above, the actuarially determined contribution on a dollar basis decreased, but the actuarially determined contribution rate increased as a percent of pay compared to last year. Below is a reconciliation of the change in the contribution rate:

**RECONCILIATION OF ACTUARIALLY DETERMINED CONTRIBUTION RATE**

| | | |
|---|---|---|
| (1) July 1, 2020 Valuation Contribution Rate | | 31.0% |
| (2) Increase (Decrease) due to: | | |
| (a) Variance from demographic and salary assumptions | 1.7% | |
| (b) Recognition of prior investment losses/gains | (1.2)% | |
| (c) Assumption changes | 0.0% | |
| Total change in Contribution Rate | 0.5% | |
| (3) July 1, 2021 Valuation Contribution Rate | | 31.5% |

Demographic experience different than expected by the valuation assumptions increased the contribution rate about 1.7%. About 0.3% of this amount is due to actuarial losses. The remaining amount is due to the Plan freeze and the decreasing number of covered active members and covered base pay. As the number of active members decreases, the contribution rate as a percentage of covered pay is expected to continue increasing. If covered base pay was the same as last year, the contribution rate would have been 29.5%.

The actuarially determined contribution rate uses an actuarial value of assets with smoothed investment gains and losses. A portion of the market value loss for the prior year, as well as a portion of the gains and losses from the preceding three years, is recognized in the actuarial value of assets this year. The rate of return on the smoothed value of assets was about 10.4% for the 2020-2021 plan year. This is different than the 28.6% rate of return on the market value of assets due to delayed recognition of prior years' gains and losses.

If market value assets were used to develop the actuarially determined contribution rate, the rate would decrease from 31.5% to 26.9%. Thus, the contribution rate in future years is expected to decrease as past investment losses are recognized in the actuarial value of assets, if all actuarial assumptions are met and if participation and covered base pay remained steady.

To the extent actual experience differs from the assumptions, or if the assumptions or plan provisions are changed, future actuarial costs will vary.

## Financial Information

The Plan’s financial information was provided by Mercer Advisors and Raymond James Financial Services. The Plan’s market value of assets and investment return for the year ending June 30, 2021 are shown below, along with the comparable figures from last year:

| FINANCIAL INFORMATION | July 1, 2020 | July 1, 2021 |
|---|---|---|
| Market Value of Assets | $27,017,501 | $34,544,238 |
| Actuarial Value of Assets | $27,913,818 | $30,612,135 |
| Investment Return for Prior Year (Market Value) | 3.6% | 28.6% |
| Investment Return for Prior Year (Actuarial Value) | 4.9% | 10.4% |

The Plan’s investment return should be compared to the actuarial assumption used for the July 1, 2020 Actuarial Valuation of 7.0%. The 28.6% investment return on the market value of assets produced an investment gain of approximately $5.8 million during the 2020-2021 plan year. This loss will be recognized over a 5-year period under the Plan’s asset smoothing method.

## GASB Information

The Government Accounting Standards Board requires certain disclosures of both the Plan and the Employer. The information required by GASB 67 and 68 are shown in *Table 10* through *Table 18*, and is summarized below:

| GASB INFORMATION | | |
|---|---|---|
| Measurement Date | June 30, 2020 | June 30, 2021 |
| Total Pension Liability | $ 39,927,493 | $ 42,115,987 |
| Fiduciary Net Position | 27,017,501 | 34,544,238 |
| Net Pension Liability | 12,909,992 | 7,571,749 |
| Pension Expense | 2,896,388 | 1,472,801 |

## Member Information

Appendix C contains a summary of the member data upon which this valuation is based. The data was provided by the County, and was accepted for valuation purposes without audit. It should be noted that if the data is inaccurate or incomplete, the valuation results may need to be revised. A comparison of members valued this year versus last year follows:

**MEMBER STATISTICS**

| | **July 1, 2020** | **July 1, 2021** |
|---|---|---|
| Retirees and Beneficiaries | 68 | 75 |
| Total Monthly Benefit Paid From Trust* | $126,434 | $152,746 |
| Vested Terminated Members | 25 | 28 |
| Average Accrued Monthly Benefit | $1,172 | $1,371 |
| Nonvested Terminated with Account Balances | 52 | 52 |
| Total Account Balances | $200,080 | $209,720 |
| Active Members | 108 | 92 |
| Average Salary Rate | $61,470 | $64,844 |
| Average Age | 46.9 | 46.9 |
| Average Years of Membership | 9.1 | 9.4 |
| Covered Base Pay | $6,684,725 | $6,249,435 |
| Total Members | 253 | 247 |

** Includes $60 Supplemental benefits and excludes monthly benefits paid from previously purchased annuities.*

## Plan Risks

Appendix D contains a summary of some of the risks faced by the Plan that may lead to future actuarial measurements to differ from the current measurements presented in this report. Risks include investment risk, interest rate risk, and the impact of plan maturity. This risk disclosure satisfies the requirements of the Actuarial Standard of Practice No. 51 *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*.

## Sensitivity of Results

The results reported in this valuation are dependent upon the actuarial assumptions being realized in the future. To the extent that actual experience varies from the assumptions, future actuarial costs will be modified.

## DISCUSSION OF THE VALUATION

A fundamental principle in financing the liabilities of a retirement program is that the cost of benefits should be related to when those benefits are earned, rather than to when they are paid. There are a number of methods in use for making such a determination.

The method used for this valuation is referred to as the individual entry age normal actuarial cost method. Under the individual entry age method, a normal cost is determined for each active member. The normal cost is the annual contribution determined as a level percent of base salary which would be paid from year of entry to year of retirement to fund the projected retirement benefit. The normal cost for inactive members is zero. The normal cost for the Plan is the sum of the individuals' normal costs.

The actuarial accrued liability for an active member is an accumulation of the normal costs from entry to the valuation date. The actuarial accrued liability for an inactive member is the actuarial present value of accrued benefits. The actuarial accrued liability for the Plan is the sum of the individual actuarial accrued liabilities.

The unfunded actuarial accrued liability is the difference between the actuarial accrued liability and the actuarial value of assets, which is amortized as a level dollar amount over a closed period of time. Based on the County's funding policy, the unfunded actuarial accrued liability (UAAL) is amortized over a closed amortization period as a level percent of covered base pay. The amortization period for new amortization bases is currently 20 years. Amortization payments are assumed to increase 2.75% annually

These valuation results depend on actual experience matching the actuarial assumptions. To the extent that actual experience varies from the assumptions, future actuarial costs will be different than what this valuation expects.

### ACTUARIAL VALUE OF ASSETS

*Table 1* shows the derivation of the value of assets as of July 1, 2021.

*Table 2* is a summary of changes in plan net assets for the year ending June 30, 2021.

*Table 3* shows the development of the actuarial value of assets.

### ACTUARIAL BALANCE SHEET

*Table 4* shows the development of the Plan's unfunded actuarial accrued liability as of July 1, 2021.

*Table 5* is the actuarial balance sheet as of July 1, 2021 based on our procedures and assumptions. The resources equal the requirements and can be thought of as the amount of funds resulting from:

(1) the Plan's actuarial value of assets, plus

(2) the present value of future normal costs to be contributed by the County in the future, plus

(3) the present value of future payments to amortize the unfunded actuarial accrued liability.

The Actuarial Present Value of Benefits is the estimated single sum required on July 1, 2021 which, together with future interest at the Plan's assumed investment earnings rate, would accumulate to provide all benefits due under the plan in the future based on the assumptions and methods described in this report.

## NORMAL COST

*Table 6* shows the development of the Plan's normal cost for the 2021-2022 plan year. The normal cost can be thought of as the cost of benefits accruing during the plan year that will be paid in the future as retirement or termination benefits.

## ACTUARIALLY DETERMINED CONTRIBUTION RATE

*Table 7* shows the actuarially determined contribution rate for the year beginning July 1, 2022. This is the contribution as a percent of base pay of covered active members that is calculated based on the procedures and assumptions chosen for this valuation and described in Appendix A.

*Table 8* develops the amortization of the unfunded actuarial accrued liability as of July 1, 2021.

## PROJECTED BENEFIT PAYMENTS

*Table 9* shows the benefit payments projected to be paid from the Plan for the current population over the next 20 years, assuming experience follows the actuarial assumptions outlined in Appendix A.

## ACCOUNTING STANDARDS

The Governmental Accounting Standards Board (GASB) issued accounting standards for both the Financial Reporting for Pension Plans (Statement No. 67) and the Accounting and Financial Reporting for Pensions (Statement No. 68). GASB 67 applies to financial reporting for public pension plans and is effective for plan fiscal years beginning after June 15, 2013. GASB 68 governs the specifics of accounting for public pension plan obligations for employers and is effective for employer fiscal years beginning after June 15, 2014.

## REPORTING DATE, VALUATION DATE AND MEASUREMENT DATE

GASB 67 and 68 introduce and define three dates used in financial reporting:

- The reporting date is the fiscal year end consistent with the County's financial statements, June 30, 2022.
- The valuation date is the date of the actuarial valuation that supplies certain information used in the County's financial statements. GASB 68 allows the valuation date to be up to 30 months prior to the reporting date. Based on the County's direction, we used the valuation date 12 months before the reporting date, June 30, 2021.
- The measurement date is the date as of which the Net Pension Liability (NPL) is calculated. GASB 68 allows the measurement date to be up to 12 months before the reporting date. Based on the County's direction, we used the valuation date 12 months before the reporting date, June 30, 2021.

## DISCOUNT RATE

The discount rate for purposes of calculating liabilities in this report is 7.0% which equals the expected long-term expected rate of return on plan assets.

Under GASB 67 and 68, the discount rate is a single, blended rate. The long-term expected return on Plan assets is used to discount projected benefit payments to the extent Plan assets plus future contributions in excess of normal costs are sufficient to pay projected benefits. A 20-year tax-exempt, high quality general obligation municipal bond rate or index rate is used to discount projected benefit payments to the extent plan assets and future contributions are not sufficient to pay projected benefits. The blended discount rate is a single rate that produces the same present value when discounting all projected benefit payments as the dual rate process described above.

The standards provide that professional judgment should be used in projecting contributions. Contributions established by statute or contract or any formal, written policy related to contributions should be reflected. The most recent five years of contributions made by the employer should also be considered as a key indicator of future contributions. In absence of a contract or formal written policy, contributions should be limited to an average of contributions over the most recent five years, adjusted for any subsequent events.

*Table 10* discusses the techniques and assumptions used for the depletion date projection. We noted that the County does not have a formal, written funding policy and that County contributions to the Plan were higher than the actuarially determined contribution during the last five years. We took this into account in our projection of future contributions.

*Table 11* shows the projection of the fiduciary net position over the next 94 years assuming all assumptions are met and describes the discount rate.

## NET PENSION LIABILITY

The net pension liability is measured as the total pension liability net of the fiduciary net position.

The fiduciary net position as of June 30, 2020 and June 30, 2021 equals the market value of assets at the respective dates.

*Table 12* shows the net pension liability as of June 30, 2020 and June 30, 2021 based on the applicable discount rate. For the June 30, 2020 measurement, the applicable discount rate was 7.0%. For the June 30, 2021 measurement, the applicable discount rate was 7.0% as shown in *Table 11*. The changes in the net pension liability for fiscal year ending June 30, 2021 are shown on *Table 13*. The 10-year schedule of changes in the net pension liability and related ratios are provided in *Table 16*. This 10-year schedule is shown on a prospective basis from June 30, 2014 as allowed under GASB 67 and 68.

The covered payroll shown on *Table 12* is based on the eligible compensation data for covered active members reported to us by the County for the valuation and benefit statements.

## SENSITIVITY ANALYSIS

*Table 13* shows what the net pension liability would be using a discount rate that is one percent lower and one percent higher than the rate used as of June 30, 2021.

## PENSION EXPENSE

The annual pension expense reflects changes in the net pension liability from the prior year to the current year, with limited smoothing for deferred items. Because GASB requires that changes in the net pension liability due to gains and losses, assumption changes and plan amendments be reflected in whole or in part during the current measurement period, the final pension expense for any year will not be known until after the end of the measurement period. *Table 14* shows the pension expense for the measurement period ending June 30, 2021, which will be reported in the County's fiscal year end June 30, 2022 financial statements.

## DEFERRED INFLOWS AND OUTFLOWS

Under GASB 68, gains and losses are referred to as deferred inflows (gains) and deferred outflows (losses). These amounts are amortized beginning in the year they arise, and over future years.

- Investment gains and losses are recognized over a closed, five-year period.
- Economic and demographic gains and losses, and changes in the total pension liability due to changes in assumptions are recognized over the closed period equal to the average expected remaining service lives of all covered active and inactive members.
- The amortization period equals the weighted average of expected remaining service lives assuming zero years for all inactive members. Inactive members include terminated vested, disabled, retired, and beneficiaries.
- The amortization period for the June 30, 2020 to June 30, 2021 measurement period was 3.3 years, based on expected remaining service of 847 years, divided by a total member count of 253 as of July 1, 2020.

*Table 14* shows the total deferred inflows and outflows of resources as of June 30, 2021, along with a schedule showing the amounts that will be recognized in future years. All outstanding deferred inflows and outflows as of June 30, 2021 are shown on *Table 15*.

Since the County is reporting information as of June 30, 2021 for the fiscal year end 2022 financial statements, any contributions made during fiscal year 2022 need to be reported as a deferred outflow in *Table 14*. We left that amount, as well as the total deferred outflow, as TBD for the County to fill out as those amounts become known.

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

*Table 17* contains a 10-year schedule of the actuarially determined contribution, contributions made in relation to the actuarially determined contribution and related ratios. It also summarizes the significant methods and assumptions that were used to develop the actuarially determined contribution.

## MONEY-WEIGHTED RATE OF RETURN

*Table 18* calculates the money-weighted rate of return net of investment expenses for the fiscal year ending June 30, 2021, assuming monthly cash flows occur mid-month.

## NOTES AND REQUIRED SUPPLEMENTARY INFORMATION

GASB 67 and 68 require additional information be presented in the notes to the financial statements and required supplementary information (RSI). The exhibits in this report relate to the actuarial disclosures of the Plan. Additional information related to the Plan provisions, census data, and assumptions and methods used for the actuarial disclosures may be found in the respective actuarial valuation reports for the previous plan years. Please let us know if you require additional information from us to complete the notes and RSI portions of the financial statements.

*Table 1*

**MORROW COUNTY**
**RETIREMENT PLAN**

**Statement of Plan Net Assets**
**(July 1, 2021)**

| | |
|---|---|
| **Assets** | |
| Cash and Cash Alternatives | $ 315,090 |
| Prepaid Benefit Payments | 0 |
| Mutual Funds | 34,229,148 |
| Total | $ 34,544,237 |
| **Liability** | 0 |
| **Net Assets Held for Pension Benefits** | $ 34,544,237 |

*Table 2*

**MORROW COUNTY**
**RETIREMENT PLAN**

**Statement of Changes in Plan Net Assets**
**(Plan Year Ended June 30, 2021)**

| | |
|---|---|
| **Additions** | |
| Employer Contributions | $ 2,005,657 |
| Voluntary Employee Contributions | 78,190 |
| Earnings | 7,751,806 |
| Total Additions | $ 9,835653 |
| **Deductions** | |
| Benefit Payments | $ 2,225,184 |
| Administrative Expenses | 55,889 |
| Investment Expense | 27,843 |
| Total Deductions | $ 2,308,916 |
| **Net Increase** | $ 7,526,737 |
| **Assets Held for Pension Benefits** | |
| Beginning of Year | 27,017,501 |
| End of Year | $ 34,544,238 |
| **Investment Rate of Return, Net of Expenses** | 28.6% |

## MORROW COUNTY
## RETIREMENT PLAN

### Actuarial Value of Assets
### (July 1, 2021)

| Year | (1) Market Value of Assets Beginning of Year | (2) Total Contributions | (3) Benefit Payments | (4) Operating Expenses | (5) Cash Flow (2)+(3)+(4) | (6) Investment Return Net of Expenses | (7) Market Value of Assets End of Year (1)+(5)+(6) |
|---|---|---|---|---|---|---|---|
| 2020-2021 | $27,017,501 | $2,083,847 | $(2,225,184) | $(55,889) | $(197,226) | $7,723,963 | $34,544,238 |
| 2019-2020 | 25,466,923 | 2,127,786 | (1,464,644) | (49,808) | 613,334 | 937,244 | 27,017,501 |
| 2018-2019 | 23,975,779 | 2,032,668 | (1,627,635) | (95,888) | 309,145 | 1,181,999 | 25,466,923 |
| 2017-2018 | 21,148,866 | 2,865,317 | (1,443,225) | (40,865) | 1,381,227 | 1,445,686 | 23,975,779 |

| Year | Actual Investment Rate of Return | Actual Investment Return | Expected Investment Return | Difference between Actual and Expected |
|---|---|---|---|---|
| 2020-2021 | 28.6% | $ 7,723,963 | $1,884,322 | $ 5,839,641 |
| 2020-2021 | 3.6% | 937,244 | 1,804,151 | (866,907) |
| 2019-2020 | 4.9% | 1,181,999 | 1,689,125 | (507,126) |
| 2018-2019 | 6.7% | 1,445,686 | 1,528,764 | (83,078) |

### Actuarial Value of Assets

| | |
|---|---|
| Market Value of Assets, July 1, 2021 | $34,544,238 |
| Subtract 80% of 2020-201 Gain | (4,671,713) |
| Add 60% of 2019-2020 Loss | 520,144 |
| Add 40% of 2018-2019 Loss | 202,850 |
| Add 20% of 2017-2018 Loss | 16,616 |
| Preliminary Actuarial Value of Assets, July 1, 2021 | $ 30,612,135 |
| Actuarial Value as a Percentage of Market Value | 88.6% |
| Actuarial Value of Assets (limited to 80% – 120% of Market Value) | $ 30,612,135 |

*Table 4*

## MORROW COUNTY
## RETIREMENT PLAN

### Development of Unfunded Actuarial Accrued Liability
### (July 1, 2021)

| | | |
|---|---|---|
| Unfunded Actuarial Accrued Liability July 1, 2020 | | $ 12,013,675 |
| Changes from July 1, 2020 through June 30, 2021 | | |
| Normal Cost, beginning of year | $ 981,950 | |
| Allowance for Administrative Expenses | 45,000 | |
| Employer Contributions | (2,005,657) | |
| Interest | 841,071 | |
| Total | | (137,636) |
| Expected Unfunded Actuarial Accrued Liability as of June 30, 2021 | | $ 11,876,039 |
| Investment (Gain)/Loss | | (948,479) |
| Other Actuarial (Gain)/Loss | | 565,022 |
| Expense (Gain)/Loss | | 11,270 |
| Plan Amendments | | 0 |
| Assumption and Method Changes | | 0 |
| Unfunded Actuarial Accrued Liability July 1, 2021 | | $ 11,503,852 |

*Table 5*

**MORROW COUNTY**
**RETIREMENT PLAN**

## Actuarial Balance Sheet
## (July 1, 2021)

### REQUIREMENTS

| | | |
|---|---|---|
| Retirees and Beneficiaries | $ | 21,703,906 |
| Vested Terminated and Inactive Members | | 4,853,051 |
| Active Members | | |
| Retirement | $ | 19,335,013 |
| Withdrawal | | 709,406 |
| Return of Contributions | | 948,760 |
| Death | | 0 |
| Disability | | 0 |
| Other* | | 624,925 |
| Active Total | | 21,618,104 |
| TOTAL REQUIREMENTS | $ | 48,175,061 |

### RESOURCES

| | | |
|---|---|---|
| Actuarial Value of Assets | $ | 30,612,135 |
| Present Value of Future Normal Costs | | 6,059,074 |
| Unfunded Actuarial Accrued Liability July 1, 2021 (Present Value of Future Amortization Payments) | | 11,503,852 |
| TOTAL RESOURCES | $ | 48,175,061 |

* This represents the liability from the supplemental benefit and current voluntary account balances.

**MORROW COUNTY**
**RETIREMENT PLAN**

**Normal Cost**
**(July 1, 2021)**

| | | |
|---|---|---|
| Retirement Benefits | $ 701,444 | |
| Termination Benefits | 42,429 | |
| Supplemental Benefit | 9,989 | |
| Return of Contributions | 123,572 | |
| Total Normal Cost, Beginning of Year | | $ 877,434 |
| Adjustment to Mid-Year (7.0%) | | 30,710 |
| Total Normal Cost, Mid-Year | | $ 908,144 |

## MORROW COUNTY
## RETIREMENT PLAN

### Actuarially Determined Contribution Rate
### (For Year Beginning July 1, 2022)

| | | |
|---|---|---|
| (1) | Present Value of Benefits | $ 48,175,061 |
| (2) | Present Value of Future Normal Costs | 6,059,074 |
| (3) | Actuarial Accrued Liability (1) – (2) | $ 42,115,987 |
| (4) | Actuarial Value of Assets | 30,612,135 |
| (5) | Unfunded Actuarial Accrued Liability (3) – (4) | $ 11,503,852 |
| (6) | Amortization of the Unfunded Actuarial Accrued Liability* | $ 1,016,622 |
| (7) | Allowance for Administrative Expense (Mid-Year) | 45,000 |
| (8) | Total Normal Cost | 908,144 |
| (9) | Actuarially Determined Contribution Payable Mid-Year (6) + (7) + (8) | $ 1,969,766 |
| (10) | Covered Base Pay | $ 6,249,435 |
| (11) | Actuarially Determined Contribution Rate For Year Beginning July 1, 2022 (9) ÷ (10) | 31.5% |

* The unfunded actuarial accrued liability (UAAL) is amortized over a closed amortization period as a level percent of covered base pay. The amortization period for new amortization bases is currently 20 years. Amortization payments are assumed to increase 2.75% annually. (See *Table 8*)

**MORROW COUNTY**
**RETIREMENT PLAN**

**Determination of Amortization of Unfunded Actuarial Accrued Liability**
**(July 1, 2021)**

| Date Established | Years Remaining | Outstanding Balance as of July 1, 2021 | Amortization Payment* |
|---|---|---|---|
| 7/1/2012 | 16 | $ 5,821,119 | $ 484,561 |
| 7/1/2013 | 12 | 332,860 | 34,327 |
| 7/1/2014 | 13 | 386,794 | 37,512 |
| 7/1/2015 | 14 | 2,386,228 | 218,885 |
| 7/1/2016 | 15 | 785,521 | 68,492 |
| 7/1/2017 | 16 | 511,634 | 42,589 |
| 7/1/2018 | 17 | (418,142) | (33,355) |
| 7/1/2019 | 18 | 1,062,591 | 81,499 |
| 7/1/2020 | 19 | 940,429 | 69,558 |
| 7/1/2021 | 20 | (305,182) | (21,825) |
| | | $ 11,503,852 | $ 982,243 |
| Total Payment, Middle of the Year ($982,243 x 1.035) | | | $ 1,016,622 |

*Amortization payments will increase 2.75% each year.

## MORROW COUNTY
## RETIREMENT PLAN

### Twenty-Year Projection of Benefit Payouts

| Plan Year Beginning July 1, | Estimated Payout of Retirement Benefits* |
|---|---|
| 2021 | 2,333,000 |
| 2022 | 2,422,000 |
| 2023 | 2,584,000 |
| 2024 | 2,695,000 |
| 2025 | 2,825,000 |
| 2026 | 3,033,000 |
| 2027 | 3,201,000 |
| 2028 | 3,341,000 |
| 2029 | 3,462,000 |
| 2030 | 3,606,000 |
| 2031 | 3,751,000 |
| 2032 | 3,858,000 |
| 2033 | 3,931,000 |
| 2034 | 4,021,000 |
| 2035 | 4,095,000 |
| 2036 | 4,132,000 |
| 2037 | 4,199,000 |
| 2038 | 4,261,000 |
| 2039 | 4,301,000 |
| 2040 | 4,363,000 |

*Payouts shown do not include distributions of voluntary account balances or account balances of non-vested terminated members.

**MORROW COUNTY**
**RETIREMENT PLAN**

## Depletion Date Projection

To determine the discount rate used to calculate the total pension liability (TPL), we prepared a depletion date projection using the following methods and assumptions:

- Benefit payments are projected based on the Plan provisions, and the actuarial assumptions and method summarized in the July 1, 2021 Actuarial Valuation.
- Administrative expenses are assumed to be $45,000 for the 2021-2022 fiscal year, increasing 3% per year for each year benefit payments increase, and decreasing 2% per year thereafter.
- The County is assumed to contribute 100% of the projected actuarially determined contribution in future years, based on the average amount contributed in the last five years. The method used to project the actuarially determined contribution is described below.

  Since the County does not have a formal, written funding policy, we projected the actuarially determined contribution based on the actuarial cost method and assumptions described in this report:

  - Use of the entry age normal, level percentage of payroll actuarial cost allocation method
  - Five year smoothing of market value investment gains and losses, with the resulting smoothed asset value forced to be within 20% of the market value of assets.
  - Long-term average annual investment return of 7.00%, net of investment expenses.
  - Annual changes in unfunded actuarial accrued liability are amortized in layers over 20 years on a level percent of covered base pay. Amortization payments are assumed to increase 2.75% annually.
  - Active member count and covered base pay in future years is projected based on the decrement and salary scale assumptions described in Appendix A.
- Contributions, expenses, and benefit payments are assumed to occur mid-year.

Future projections will yield different results as actual Plan experience becomes known.

## MORROW COUNTY
## RETIREMENT PLAN

### Projection of Fiduciary Net Position and Discount Rate

| Fiscal Year Beginning | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments | Projected Administrative Expenses | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|---|---|---|---|---|---|---|
| 7/1/2021 | $ 34,544,238 | $ 1,937,325 | $(2,978,537) | $ (45,000) | $ 2,380,722 | $ 35,838,748 |
| 7/1/2022 | 35,838,748 | 1,819,973 | (2,421,684) | (46,350) | 2,486,414 | 37,677,100 |
| 7/1/2023 | 37,677,100 | 1,750,577 | (2,584,247) | (47,741) | 2,607,069 | 39,402,759 |
| 7/1/2024 | 39,402,759 | 1,594,798 | (2,694,841) | (49,173) | 2,718,651 | 40,972,193 |
| 7/1/2025 | 40,972,193 | 1,503,684 | (2,825,227) | (50,648) | 2,820,839 | 42,420,841 |
| 7/1/2026 | 42,420,841 | 1,378,081 | (3,032,935) | (52,167) | 2,910,724 | 43,624,544 |
| 7/1/2027 | 43,624,544 | 1,352,056 | (3,201,085) | (53,732) | 2,988,248 | 44,710,031 |
| 7/1/2028 | 44,710,031 | 1,323,731 | (3,340,771) | (55,344) | 3,058,395 | 45,696,042 |
| 7/1/2029 | 45,696,042 | 1,323,370 | (3,462,355) | (57,004) | 3,123,163 | 46,623,216 |
| 7/1/2030 | 46,623,216 | 1,305,719 | (3,606,395) | (58,714) | 3,182,443 | 47,446,269 |
| 7/1/2031 | 47,446,269 | 1,292,671 | (3,751,393) | (60,475) | 3,234,558 | 48,161,631 |
| 7/1/2032 | 48,161,631 | 1,259,248 | (3,858,147) | (62,289) | 3,279,748 | 48,780,191 |
| 7/1/2033 | 48,780,191 | 1,278,336 | (3,930,550) | (64,158) | 3,321,148 | 49,384,967 |
| 7/1/2034 | 49,384,967 | 1,296,039 | (4,021,425) | (66,083) | 3,360,899 | 49,954,397 |
| 7/1/2035 | 49,954,397 | 1,196,651 | (4,094,760) | (68,065) | 3,394,748 | 50,382,970 |
| 7/1/2036 | 50,382,970 | 240,410 | (4,132,428) | (70,107) | 3,390,479 | 49,811,324 |
| 7/1/2037 | 49,811,324 | 220,496 | (4,199,149) | (72,210) | 3,347,410 | 49,107,871 |
| 7/1/2038 | 49,107,871 | 188,446 | (4,261,357) | (74,376) | 3,294,851 | 48,255,436 |
| 7/1/2039 | 48,255,436 | 161,235 | (4,300,669) | (76,607) | 3,232,815 | 47,272,209 |
| 7/1/2040 | 47,272,209 | 149,254 | (4,362,821) | (78,905) | 3,161,359 | 46,141,096 |
| 7/1/2041 | 46,141,096 | 117,681 | (4,333,932) | (77,327) | 3,082,143 | 44,929,661 |
| 7/1/2042 | 44,929,661 | 109,951 | (4,324,991) | (75,780) | 2,997,438 | 43,636,278 |
| 7/1/2043 | 43,636,278 | 94,292 | (4,289,135) | (74,264) | 2,907,648 | 42,274,819 |
| 7/1/2044 | 42,274,819 | 80,511 | (4,286,087) | (72,779) | 2,812,028 | 40,808,492 |
| 7/1/2045 | 40,808,492 | 57,684 | (4,234,164) | (71,323) | 2,710,436 | 39,271,125 |
| 7/1/2046 | 39,271,125 | 47,954 | (4,169,660) | (69,897) | 2,604,754 | 37,684,276 |
| 7/1/2047 | 37,684,276 | 39,465 | (4,068,186) | (68,499) | 2,496,922 | 36,083,978 |
| 7/1/2048 | 36,083,978 | 34,682 | (3,961,120) | (67,129) | 2,388,468 | 34,478,879 |
| 7/1/2049 | 34,478,879 | 29,018 | (3,852,611) | (65,786) | 2,279,696 | 32,869,195 |
| 7/1/2050 | 32,869,195 | 20,849 | (3,757,712) | (64,470) | 2,170,047 | 31,237,909 |
| 7/1/2051 | 31,237,909 | 11,004 | (3,610,233) | (63,181) | 2,060,637 | 29,636,137 |
| 7/1/2052 | 29,636,137 | 11,027 | (3,466,450) | (61,917) | 1,953,505 | 28,072,301 |
| 7/1/2053 | 28,072,301 | 8,059 | (3,317,164) | (60,679) | 1,849,113 | 26,551,631 |
| 7/1/2054 | 26,551,631 | 5,968 | (3,166,626) | (59,465) | 1,747,816 | 25,079,324 |
| 7/1/2055 | 25,079,324 | 3,856 | (2,999,505) | (58,276) | 1,650,473 | 23,675,873 |
| 7/1/2056 | 23,675,873 | 3,979 | (2,850,018) | (57,110) | 1,557,419 | 22,330,143 |

Note: We omitted years after July 1, 2056 and before July 1, 2081 from this table.

# MORROW COUNTY
# RETIREMENT PLAN

## Projection of Fiduciary Net Position and Discount Rate

| Fiscal Year Beginning | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments | Projected Administrative Expenses | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|---|---|---|---|---|---|---|
| 7/1/2081 | $ 17,404,932 | $ 0 | $ (163,861) | $ (34,464) | $ 1,211,521 | $ 18,418,128 |
| 7/1/2082 | 18,418,128 | 0 | (135,683) | (33,775) | 1,283,438 | 19,532,109 |
| 7/1/2083 | 19,532,109 | 0 | (111,524) | (33,100) | 1,362,271 | 20,749,756 |
| 7/1/2084 | 20,749,756 | 0 | (90,959) | (32,438) | 1,448,237 | 22,074,596 |
| 7/1/2085 | 22,074,596 | 0 | (73,565) | (31,789) | 1,541,597 | 23,510,839 |
| 7/1/2086 | 23,510,839 | 0 | (58,988) | (31,153) | 1,642,657 | 25,063,355 |
| 7/1/2087 | 25,063,355 | 0 | (46,856) | (30,530) | 1,751,772 | 26,737,741 |
| 7/1/2088 | 26,737,741 | 0 | (36,836) | (29,919) | 1,869,345 | 28,540,332 |
| 7/1/2089 | 28,540,332 | 0 | (28,643) | (29,321) | 1,995,829 | 30,478,196 |
| 7/1/2090 | 30,478,196 | 0 | (22,005) | (28,735) | 2,131,728 | 32,559,184 |
| 7/1/2091 | 32,559,184 | 0 | (16,701) | (28,160) | 2,277,599 | 34,791,923 |
| 7/1/2092 | 34,791,923 | 0 | (12,536) | (27,597) | 2,434,054 | 37,185,843 |
| 7/1/2093 | 37,185,843 | 0 | (9,308) | (27,045) | 2,601,758 | 39,751,249 |
| 7/1/2094 | 39,751,249 | 0 | (6,845) | (26,504) | 2,781,440 | 42,499,340 |
| 7/1/2095 | 42,499,340 | 0 | (4,984) | (25,974) | 2,973,889 | 45,442,270 |
| 7/1/2096 | 45,442,270 | 0 | (3,594) | (25,455) | 3,179,959 | 48,593,181 |
| 7/1/2097 | 48,593,181 | 0 | (2,568) | (24,946) | 3,400,576 | 51,966,243 |
| 7/1/2098 | 51,966,243 | 0 | (1,816) | (24,447) | 3,636,733 | 55,576,713 |
| 7/1/2099 | 55,576,713 | 0 | (1,269) | (23,958) | 3,889,502 | 59,440,988 |
| 7/1/2100 | 59,440,988 | 0 | (874) | (23,479) | 4,160,031 | 63,576,667 |
| 7/1/2101 | 63,576,667 | 0 | (593) | (23,009) | 4,449,555 | 68,002,619 |
| 7/1/2102 | 68,002,619 | 0 | (398) | (22,549) | 4,759,394 | 72,739,066 |
| 7/1/2103 | 72,739,066 | 0 | (264) | (22,098) | 5,090,965 | 77,807,669 |
| 7/1/2104 | 77,807,669 | 0 | (171) | (21,656) | 5,445,786 | 83,231,627 |
| 7/1/2105 | 83,231,627 | 0 | (110) | (21,223) | 5,825,480 | 89,035,775 |
| 7/1/2106 | 89,035,775 | 0 | (69) | (20,799) | 6,231,786 | 95,246,693 |
| 7/1/2107 | 95,246,693 | 0 | (43) | (20,383) | 6,666,566 | 101,892,833 |
| 7/1/2108 | 101,892,833 | 0 | (26) | (19,975) | 7,131,810 | 109,004,642 |
| 7/1/2109 | 109,004,642 | 0 | (16) | (19,576) | 7,629,651 | 116,614,700 |
| 7/1/2110 | 116,614,700 | 0 | (10) | (19,184) | 8,162,369 | 124,757,875 |
| 7/1/2111 | 124,757,875 | 0 | (6) | (18,800) | 8,732,404 | 133,471,474 |
| 7/1/2112 | 133,471,474 | 0 | (3) | (18,424) | 9,342,369 | 142,795,415 |
| 7/1/2113 | 142,795,415 | 0 | (2) | (18,056) | 9,995,058 | 152,772,415 |
| 7/1/2114 | 152,772,415 | 0 | (1) | (17,695) | 10,693,460 | 163,448,179 |
| 7/1/2115 | 163,448,179 | 0 | (0) | (17,341) | 11,440,776 | 174,871,614 |

*Projection Results:* The Plan's fiduciary net position is not projected to become insolvent.

*Discount Rate:* The discount rate for purposes of calculating liabilities in this report equals the expected long-term expected rate of return on plan assets, 7.0%.

**MORROW COUNTY**
**RETIREMENT PLAN**

## Net Pension Liability

| **Net Pension Liability** | **June 30, 2020** | **June 30, 2021** |
|---|---|---|
| Total pension liability | $39,927,493 | $42,115,987 |
| Fiduciary net position | 27,017,501 | 34,544,238 |
| Net pension liability | 12,909,992 | 7,571,749 |
| Fiduciary net position as a % of total pension liability | 67.67% | 82.02% |
| Covered payroll | 6,684,360 | 6,511,875 |
| Net pension liability as a % of covered payroll | 193.14% | 116.28% |

The total pension liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below.

**Discount Rate**

As shown in *Table 11*, the discount rate for calculating the total pension liability equals the long-term expected rate of return.

| | | |
|---|---|---|
| Discount rate | 7.00% | 7.00% |
| Long-term expected rate of return (net of investment expenses) | 7.00% | 7.00% |
| Salary Scale | Years of Service | Annual Salary Increase |
| | 0-1 | 7.50% |
| | 2-4 | 6.25% |
| | 5-9 | 4.75% |
| | 10+ | 3.75% |

**Other Key Actuarial Assumptions**

| | | |
|---|---|---|
| Valuation date | July 1, 2020 | July 1, 2021 |
| Measurement date | June 30, 2020 | June 30, 2021 |
| Cost-of-Living Increases | 2.0% per year | 2.0% per year |
| Mortality | Blended RP-2000 table; 25% blue collar/ 75% white collar, set back 12 months for males, no setback for females.<br><br>No pre-retirement mortality assumption. | Blended RP-2000 table; 25% blue collar/ 75% white collar, set back 12 months for males, no setback for females.<br><br>No pre-retirement mortality assumption. |

**MORROW COUNTY**
**RETIREMENT PLAN**

**Changes in Net Pension Liability**
**(June 30, 2020 to June 30, 2021)**

| **Changes in Net Pension Liability** | **Total Pension Liability (a)** | **Plan Fiduciary Net Position (b)** | **Net Pension Liability (a) - (b)** |
|---|---|---|---|
| Balances as of June 30, 2020 | $39,927,493 | $27,017,501 | $12,909,992 |
| Changes for the year: | | | |
| Service cost | 981,950 | | 981,950 |
| Interest on total pension liability | 2,788,516 | | 2,788,516 |
| Effect of plan changes | 0 | | 0 |
| Effect of economic/demographic (gains) or losses | 565,022 | | 565,022 |
| Effect of assumptions changes or inputs | 0 | | 0 |
| Benefit payments | (2,225,184) | (2,225,184) | 0 |
| Administrative expenses | | (55,889) | 55,889 |
| Member contributions | 78,190 | 78,190 | 0 |
| Net investment income | | 7,723,963 | (7,723,963) |
| Employer contributions | | 2,005,657 | (2,005,657) |
| Balances as of June 30, 2021 | $42,115,987 | $34,544,238 | $ 7,571,749 |

**Sensitivity Analysis**

The following presents the net pension liability of the Plan, calculated using the discount rate of 7.0%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is one percent lower (6.0%) or one percent higher (8.0%) than the current rate.

| | **1% Decrease 6.0%** | **Current Discount Rate 7.0%** | **1% Increase 8.0%** |
|---|---|---|---|
| Total pension liability | $47,175,832 | $42,115,987 | $37,887,993 |
| Fiduciary net position | 34,544,238 | 34,544,238 | 34,544,238 |
| Net pension liability | $12,631,594 | $7,571,749 | $3,343,755 |

*Table 14*

**MORROW COUNTY**
**RETIREMENT PLAN**

**Pension Expense**

| **Pension Expense** | **Fiscal Year Ending June 30, 2022** |
|---|---|
| Service cost | $ 981,950 |
| Interest on total pension liability | 2,788,516 |
| Effect of plan changes | 0 |
| Administrative expenses | 55,889 |
| Expected investment return net of investment expenses | (1,884,322) |
| Recognition of Deferred (Inflows)/Outflows of Resources | |
| Recognition of economic/demographic (gains) or losses | 541,988 |
| Recognition of assumption changes or inputs | 0 |
| Recognition of investment (gains) or losses | (1,011,220) |
| Pension Expense | $ 1,472,801 |

As of June 30, 2022, the deferred inflows and outflows of resources are as follows:

| **Deferred (Inflows) / Outflows of Resources** | **Deferred Inflows of Resources*** | **Deferred Outflows of Resources*** |
|---|---|---|
| Differences between expected and actual experience | $ 0 | $ 663,251 |
| Changes of assumptions or inputs | 0 | 0 |
| Net difference between projected and actual earnings | (3,932,103) | 0 |
| Contributions made subsequent to measurement date | N/A | TBD |
| Total | $ (3,932,103) | $ TBD |

* *Deferred outflows of resources are presented as positive amounts. Deferred inflows of resources are presented as negative amounts.*

Other amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

| Year ended June 30: | Annual Recognition** |
|---|---|
| 2023 | $ (479,382) |
| 2024 | (678,361) |
| 2025 | (943,180) |
| 2026 | (1,167,929) |
| 2027 | 0 |
| Thereafter | 0 |

** *Note that future deferred inflows and outflows of resources may impact these numbers. Deferred outflows of resources are presented as positive amounts. Deferred inflows of resources are presented as negative amounts*

# MORROW COUNTY
# RETIREMENT PLAN

## Schedule of Deferred (Inflows) and Outflows of Resources

| | Original Amount | Experience Period | Original Recognition Period* | Amount Recognized in Expense 06/30/2022 | Balance of Deferred Inflows 06/30/2022 | Balance of Deferred Outflows 06/30/2022 |
|---|---|---|---|---|---|---|
| Investment (gains) or losses | $ (5,839,641) | 2020-2021 | 5.0 | $ (1,167,928) | $ (4,671,713) | $ 0 |
| | 866,907 | 2019-2020 | 5.0 | 173,381 | 0 | 520,145 |
| | 507,126 | 2018-2019 | 5.0 | 101,425 | 0 | 202,851 |
| | 83,078 | 2017-2018 | 5.0 | 16,616 | 0 | 16,614 |
| | (673,578) | 2016-2017 | 5.0 | (134,714) | 0 | 0 |
| | | | | $ (1,011,220) | $ (4,671,713) | $ 739,610 |
| Economic/demographic (gains) or losses | $ 565,022 | 2020-2021 | 3.3 | $ 171,219 | $ 0 | $ 393,803 |
| | 478,937 | 2019-2020 | 3.3 | 145,132 | 0 | 188,673 |
| | 565,425 | 2018-2019 | 3.5 | 161,550 | 0 | 80,775 |
| | 448,618 | 2017-2018 | 3.5 | 64,087 | 0 | 0 |
| | | | | $ 541,988 | $ 0 | $ 663,251 |
| Assumption changes or inputs | $ 0 | 2020-2021 | 3.3 | $ 0 | $ 0 | $ 0 |
| | 0 | 2019-2020 | 3.3 | 0 | 0 | 0 |
| | 0 | 2018-2019 | 3.5 | 0 | 0 | 0 |
| | 0 | 2017-2018 | 3.5 | 0 | 0 | 0 |
| | | | | $ 0 | $ 0 | $ 0 |

* Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the weighted average of expected remaining service lives for all active and inactive members as of the beginning of the experience period.

*Table 16*

# MORROW COUNTY
# RETIREMENT PLAN

## Schedule of Changes in Total Pension Liability, Fiduciary Net Position and Related Ratios

| | Fiscal Year Ending June 30, | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 |
| **Total Pension Liability** | | | | | | | | | | |
| Service cost | $981,950 | $973,073 | $917,396 | $ 851,065 | $ 768,358 | $ 670,931 | $ 564,657 | $ 581,265 | N/A | N/A |
| Interest on total pension liability | 2,788,516 | 2,626,398 | 2,450,738 | 2,297,651 | 2,143,810 | 2,049,096 | 1,894,605 | 1,758,584 | N/A | N/A |
| Effect of plan changes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A |
| Effect of economic/demographic (gains) or losses | 565,022 | 478,937 | 565,425 | 448,618 | 577,357 | 201,509 | 1,362,260 | 393,080 | N/A | N/A |
| Effect of assumptions changes or inputs | 0 | 0 | 0 | 0 | 0 | 0 | 1,567,973 | 0 | N/A | N/A |
| Benefit payments | (2,225,184) | (1,464,644) | (1,627,635) | (1,443,225) | (1,416,721) | (2,021,216) | (1,030,803) | (834,561) | N/A | N/A |
| Member contributions | 78,190 | 69,003 | 63,676 | 53,759 | 57,180 | 48,953 | 34,322 | 25,633 | N/A | N/A |
| Net change in total pension liability | 2,188,494 | 2,682,767 | 2,369,600 | 2,207,868 | 2,129,984 | 949,273 | 4,393,014 | 1,924,001 | N/A | N/A |
| Total pension liability, beginning | 39,927,493 | 37,244,726 | 34,875,126 | 32,667,258 | 30,537,274 | 29,588,001 | 25,194,987 | 23,270,986 | N/A | N/A |
| Total pension liability, ending (a) | 42,115,987 | 39,927,493 | 37,244,726 | 34,875,126 | 32,667,258 | 30,537,274 | 29,588,001 | 25,194,987 | 23,270,986 | N/A |
| **Fiduciary Net Position** | | | | | | | | | | |
| Employer contributions | $2,005,657 | $2,058,783 | $1,968,992 | $2,811,558 | $1,769,758 | $1,350,209 | $1,225,021 | $1,074,867 | N/A | N/A |
| Member contributions | 78,190 | 69,003 | 63,676 | 53,759 | 57,180 | 48,953 | 34,322 | 25,633 | N/A | N/A |
| Investment income net of investment expenses | 7,723,963 | 937,244 | 1,181,999 | 1,445,686 | 2,001,161 | (447,095) | 271,052 | 2,778,923 | N/A | N/A |
| Benefit payments | (2,225,184) | (1,464,644) | (1,627,635) | (1,443,225) | (1,416,721) | (2,021,216) | (1,030,803) | (834,561) | N/A | N/A |
| Administrative expenses | (55,889) | (49,808) | (95,888) | (40,865) | (45,738) | (67,539) | (13,825) | (92,124) | N/A | N/A |
| Net change in plan fiduciary net position | 7,526,737 | 1,550,578 | 1,491,144 | 2,826,913 | 2,365,640 | (1,136,688) | 485,767 | 2,952,738 | N/A | N/A |
| Fiduciary net position, beginning | 27,017,501 | 25,466,923 | 23,975,779 | 21,148,866 | 18,783,226 | 19,919,914 | 19,434,147 | 16,481,409 | N/A | N/A |
| Fiduciary net position, ending (b) | 34,544,238 | 27,017,501 | 25,466,923 | 23,975,779 | 21,148,866 | 18,783,226 | 19,919,914 | 19,434,147 | 16,481,409 | N/A |
| Net pension liability, ending = (a) - (b) | $7,571,749 | $12,909,992 | $11,777,803 | $10,899,347 | $11,518,392 | $11,754,048 | $9,668,087 | $5,760,840 | $6,789,577 | N/A |
| Fiduciary net position as a % of total pension liability | 82,02% | 67.67% | 68.38% | 68.75% | 64.74% | 61.51% | 67.32% | 77.13% | 70.82% | N/A |
| Covered payroll | $6,511,875 | $6,684,360 | $6,392,832 | $5,881,681 | $5,802,486 | $5,315,783 | $4,959,599 | $4,800,421 | $4,748,104 | N/A |
| Net pension liability as a % of covered payroll | 116.28% | 193.14% | 184.23% | 185.31% | 198.51% | 221.12% | 194.94% | 120.01% | 143.00% | N/A |

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not reported in accordance with the current GASB standards, they should not be reported.

# MORROW COUNTY
# RETIREMENT PLAN

## Schedule of Employer Contributions
### (Dollar Amounts in Thousands)

| | Fiscal Year Ending June 30, | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **2021** | **2020** | **2019** | **2018** | **2017** | **2016** | **2015** | **2014** | **2013** | **2012** |
| Actuarially determined contribution | $ 1,973 | $ 1,979 | $ 1,956 | $ 1,812 | $ 1,770 | $ 1,350 | $ 1,225 | $ 1,110 | $ 1,005 | $ 1,133 |
| Actual employer contribution* | 2,006 | 2,059 | 1,969 | 2,812 | 1,770 | 1,350 | 1,225 | 1,075 | 909 | 896 |
| Contribution (deficiency) excess | 33 | 80 | 13 | 1,000 | 0 | 0 | 0 | (35) | (96) | (237) |
| Covered payroll | 6,512 | 6,684 | 6,393 | 5,881 | 5,802 | 5,315 | 4,960 | 4,800 | 4,748 | 4,837 |
| Contribution as a % of covered payroll | 30.8% | 30.8% | 30.8% | 30.8% | 30.5% | 25.4% | 24.7% | 22.4% | 19.1% | 18.5% |
| Valuation Date | 7/1/2020 | 7/1/2019 | 7/1/2018 | 7/1/2017 | 7/1/2016 | 7/1/2015 | 7/1/2014 | 7/1/2013 | 7/1/2012 | 7/1/2011 |
| Investment Rate of Return Assumption | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.00% | 7.50% | 7.50% | 7.50% | 7.50% |

* *Employee contributions are excluded*

**Notes to Schedule**

Methods and assumptions used to calculate contribution rates:

| | |
|---|---|
| Actuarial Cost Method | Individual entry age normal, level percentage of pay. |
| Amortization Method | Effective July 1, 2012: Closed 20-year amortization, level percent of pay, assuming annual increase of 2.75%.<br>Effective July 1, 2005: Open 25-year amortization, level percent of pay. The amortization period decreases by one year each valuation until a 20-year period is reached. |
| Asset Valuation Method | Effective July 1, 2012: Market value gains and losses smoothed over five years, with result not less than 80% or greater than 120% of market value<br>Through July 1, 2012: Market value of assets. |
| Investment Return | Effective July 1, 2015: 7.00%<br>Through July 1, 2014: 7.50% |
| Healthy Mortality | Effective July 1, 2015: RP-2000 blended 25% blue collar/ 75% white collar, sex distinct, set back 12 months for males and no set back for females. There is no pre-retirement mortality assumption.<br>Effective July 1, 2012: Healthy Combined RP-2000 mortality with one-year setback. There is no pre-retirement mortality assumption.<br>Through July 1, 2012: Healthy Combined RP-2000 mortality for males and females. There is no pre-retirement mortality assumption. |
| Cost of Living Increases | 2.0% per year. |

Salary Increases

| Years of Service | Annual Salary Increase |
|---|---|
| 0-1 | 7.50% |
| 2-4 | 6.25% |
| 5-9 | 4.75% |
| 10+ | 3.75% |

## MORROW COUNTY
## RETIREMENT PLAN

### Money-Weighted Rate of Return
### (Fiscal Year Ending June 30, 2021)

The money-weighted rate of return is the internal rate of return on plan assets based on the amounts and timing of actual cash flows. External cash flows (contributions, benefit payments and administrative expenses) are determined on a monthly basis and are assumed to occur at the middle of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

| | Net External Cash Flows | Periods Invested | Period Weight | Net External Cash Flows With Interest |
|---|---|---|---|---|
| Beginning Value - July 1, 2020 | $27,017,501 | 12.00 | 1.00 | $34,736,802 |
| Monthly net external cash flows: | | | | |
| July | (1,676) | 11.00 | 0.96 | (2,132) |
| August | 70,059 | 10.00 | 0.88 | 87,290 |
| September | 63,832 | 9.00 | 0.79 | 77,883 |
| October | (90,328) | 8.00 | 0.71 | (107,928) |
| November | 159,892 | 7.00 | 0.63 | 187,086 |
| December | (86,250) | 6.00 | 0.54 | (98,828) |
| January | 26,774 | 5.00 | 0.46 | 30,043 |
| February | (269,883) | 4.00 | 0.38 | (296,555) |
| March | 68,675 | 3.00 | 0.29 | 73,898 |
| April | (147,270) | 2.00 | 0.21 | (155,186) |
| May | 131,961 | 1.00 | 0.13 | 136,172 |
| June | (123,012) | 0.00 | 0.04 | (124,307) |
| Ending Value - June 30, 2021 | 34,544,238 | | | |
| Money-Weighted Rate of Return | 28.57% | | | |

**Schedule of Investment Returns**

| Fiscal Year Ending June 30, | Money-Weighted Rate of Return Net of Investment Expenses |
|---|---|
| 2021 | 28.57% |
| 2020 | 3.64 |
| 2019 | 4.94 |
| 2018 | 6.67 |
| 2017 | 10.51 |
| 2016 | (2.27) |
| 2015 | 1.39 |
| 2014 | 16.77 |
| 2013 | N/A |
| 2012 | N/A |

# MORROW COUNTY
# RETIREMENT PLAN

## ACTUARIAL PROCEDURES AND ASSUMPTIONS

This section of the report describes the actuarial procedures and assumptions used in this valuation. These procedures and assumptions have been chosen on the basis of recent experience of the plan and on current expectations as to future economic conditions. The County has final authority over all assumptions used in the actuarial valuation.

The assumptions are intended to estimate the future experience of the members of the plan and of the plan itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from these assumptions will result in corresponding changes in the estimated costs of the plan's benefits.

### 1. ACTUARIAL COST METHOD (Effective July 1, 2013)

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to when those benefits are earned, rather than to when they are paid. There are a number of methods in use for making such a determination.

The method used for this valuation is referred to as the individual entry age normal actuarial cost method. Under the individual entry age method, a normal cost is determined for each active member. The normal cost is the annual contribution determined as a level percent of base salary which would be paid from year of entry to year of retirement to fund the projected retirement benefit. The normal cost for inactive members is zero. The normal cost for the Plan is the sum of the individuals' normal costs.

The actuarial accrued liability for an active member is an accumulation of the normal costs from entry to the valuation date. The actuarial accrued liability for an inactive member is the actuarial present value of accrued benefits. The actuarial accrued liability for the Plan is the sum of the individual actuarial accrued liabilities.

The unfunded actuarial accrued liability is the difference between the actuarial accrued liability and the actuarial value of assets, which is amortized as a level dollar amount over a closed period of time. Based on the County's funding policy, the unfunded actuarial accrued liability (UAAL) is amortized over a closed amortization period as a level percent of covered base pay. The amortization period for new amortization bases is currently 20 years. Amortization payments are assumed to increase 2.75% annually.

### 2. VALUATION OF ASSETS (Effective July 1, 2013)

The asset valuation method used in determining the Plan's Actuarial Value of Assets is a 5-year smoothed market value with phase-in as described in Section 3.16 of Internal Revenue Service Revenue Procedure 2000-40. Under this method, investment gains and losses are recognized gradually over a period of 5 years. The resulting Actuarial Value of Assets must be between 80% and 120% of the Market Value of Assets.

3. **INVESTMENT EARNINGS (Effective July 1, 2015)**

The future investment earnings of the Plan's assets are assumed to accrue at an annual rate of 7.0%, net of investment expenses.

4. **ADMINISTRATIVE EXPENSES (Effective July 1, 2014)**

Annual administrative (non-investment) expenses of $45,000 are assumed to be paid mid-year from the Trust.

5. **INTEREST ON MEMBER CONTRIBUTIONS**

Interest on member contributions is assumed to accrue at a net annual rate of 6.0%, compounded annually.

6. **POST-RETIREMENT BENEFIT INCREASES**

It is assumed that retirement benefits will increase at the rate of 2.0% per year after retirement for members and their beneficiaries.

7. **FUTURE SALARY INCREASES (Effective July 1, 2003)**

Member salaries are assumed to increase according to the table below:

| Years of Service | Annual Salary Increase |
|---|---|
| 0-1 | 7.50% |
| 2-4 | 6.25% |
| 5-9 | 4.75% |
| 10+ | 3.75% |

8. **MORTALITY (Effective July 1, 2015)**

The probabilities of mortality for retired members is assumed to follow a blended RP-2000 table; 25% blue collar/ 75% white collar, set back 12 months for males, no setback for females.

There is no pre-retirement mortality assumption.

This assumption is intended to reflect improvements in mortality through the valuation date and does not include a provision for mortality improvements after the valuation date.

9. **INACTIVE RETIREMENT AGE (Effective July 1, 2002)**

The assumed retirement age for inactive Safety members is 55. For all other inactive members, the assumed retirement age is 60.

## 10. TERMINATIONS FROM EMPLOYMENT

The assumed rate at which employees terminate from active employment follows table T-9 from the Actuary's Pension Handbook. Sample rates are as follows:

| Age | Rate |
|---|---|
| 25 | 17.2% |
| 35 | 13.7% |
| 45 | 8.5% |
| 55 | 1.7% |

## 11. RETIREMENT RATES

The rates of retirement used in this valuation are shown below:
Public Safety Members (Effective July 1, 1994):

| Age | Retirement Rates |
|---|---|
| 50-54 | 10% |
| 55 | 25% |
| 56-60 | 20% |
| 61-62 | 30% |
| 63 | 15% |
| 64 | 10% |
| 65 | 100% |

General Members (Effective July 1, 2010):

| Age | Retirement Rates |
|---|---|
| 55-57 | 5% |
| 58-61 | 10% |
| 62-64 | 15% |
| 65-66 | 25% |
| 67-69 | 20% |
| 70 | 100% |

## 12. UNUSED SICK LEAVE

It is assumed that members will have two months of unused sick leave at retirement.

## 13. ANNUITY

At retirement, it is assumed members will retire with the Normal Form annuity option. We assume there will be a three year certain period to approximate the value of the guarantee portion of the benefit. Members will forfeit their monthly annuity benefit at retirement if they withdraw their accumulated account balances prior to retirement. The probability of inactive members taking the lump sum prior to retirement is:

| Age | Probability |
|---|---|
| < 45 | 100% |
| 45-49 | 85% |
| 50+ | 0% |

## 14. STATE OF RESIDENCY

For purposes of the Plan's additional benefits for PERS benefit increases for eligible Public Safety Members (commonly referred to as Senate Bill 656 and House Bill 3349 tax remedies), it is assumed that members eligible for such payments are and will remain residents of the State of Oregon.

## 15. ASSUMPTION AND METHOD CHANGES

There have been no assumption or method changes since the prior valuation.

**MORROW COUNTY**
**RETIREMENT PLAN**

**PLAN SUMMARY**

**1. EFFECTIVE DATE**

The Plan was established on July 1, 1966, was last restated effective July 1, 2015, and was last amended by the Second Amendment effective June 30, 2020.

**2. ELIGIBILITY**

All full-time employees hired or rehired on or before June 30, 2020.

**3. BENEFIT FORMULA**

The sum of A and B below:

A. **Past Service**: The benefit accrued under the plan in effect on July 1, 1973

B. **Future Service**: The product of (i) times (ii) times (iii) below:

(i) 2.40% for members hired after 1994 who are not Sheriff Office Employees, 3.00% for all other employees.

(ii) The average of Basic Monthly Earnings in effect on July 1 of each of the 3 consecutive years during the last 10 years of employment, which produce the highest average rate of compensation.

(iii) The number of Years of Membership commencing on or after July 1, 1973, but prior to the Normal Retirement Date.

**4. COST-OF-LIVING ADJUSTMENT**

Each member's benefits derived from part B of benefit formula will be recalculated annually after retirement by use of a factor equal to the percentage difference between the Consumer Price Index averages for the two preceding calendar years subject to a maximum annual increase of 2.0%.

**5. NORMAL RETIREMENT BENEFIT**

A. **Eligibility**

Attainment of age 70.

B. **Amount**

The sum of (i) plus (ii) below:

(i) The amount developed by the benefit formula as of the Normal Retirement Date.

(ii) The amount developed by applying the accrued voluntary contribution balance as a premium as of the date the benefit is being determined.

C. **Normal Form**

Partial Cash Refund Annuity payable from the Normal Retirement Date.

## 6. EARLY RETIREMENT BENEFIT

### A. Eligibility

For General Members hired after 1994, attainment of age 55 with 5 Years of Membership.

For all other employees, attainment of age 50.

### B. Amount

The sum of (i) plus (ii) plus (iii) below:

(i) The amount developed by part A of the benefit formula on the date the election is made.

(ii) The amount developed by part B of the benefit formula multiplied by the appropriate percentage from the following table, based on the number of years by which election precedes the Normal Retirement Date.

| Age at Retirement | | |
|---|---|---|
| Public Safety Member | General Member | Percentage |
| 55 & above | 60 & above | 100.0% |
| 54 | 59 | 92.8 |
| 53 | 58 | 85.6 |
| 52 | 57 | 78.4 |
| 51 | 56 | 71.2 |
| 50 | 55 | 64.0 |
| | 54 | 60.8 |
| | 53 | 57.6 |
| | 52 | 54.4 |
| | 51 | 51.2 |
| | 50 | 48.0 |

The above factors will be replaced with 100% for Public Safety Members with 25 Years of Membership and for General Members with 30 Years of Membership.

(iii) The amount developed by applying the accrued voluntary contribution balance as a premium as of the date the benefit is being determined.

### C. Normal Form

Partial Cash Refund Annuity payable from the Early Retirement Date.

## 7. LATE RETIREMENT BENEFIT

### A. Eligibility

Any age after the Normal Retirement Date.

### B. Amount

The sum of (i) plus (ii) below:

(i) The amount developed by the benefit formula on the date the election is made.

(ii) The amount developed by applying the accrued voluntary contribution balance as a premium as of the date the benefit is being determined.

### C. Normal Form

Partial Cash Refund Annuity payable from the Late Retirement Date.

## 8. DISABILITY BENEFIT

### A. Eligibility

The date disability is determined to be total and permanent with the following service requirements:

(i) Five Years of Membership if the disability is not service related.

(ii) Immediate eligibility if disability is service related.

### B. Amount

General Members disabled prior to Early Retirement will receive the sum of (i) + (ii) below:

(i) The amount developed by part A of the benefit formula on the date of disability.

(ii) The amount developed by part B of the benefit formula as of the date of disability, reduced to its Actuarial Equivalent value.

For General Members disabled after the Early Retirement Age, the benefit is equal to the Early Retirement Benefit.

For Public Safety Members disabled prior to age 55, a benefit equal to the Accrued Benefit based on average earnings at disability and service projected to age 55 (not to exceed the greater of 25 or service at date of disability) will be provided.

For Public Safety Members disabled after age 55, the benefit will be equal to the current retirement benefit.

### C. Normal Form

Partial Cash Refund Annuity payable from date of disability.

## 9. SEVERANCE BENEFIT

### A. Eligibility

Completion of 5 years of coverage.

### B. Amount

The sum of (i) plus (ii) below:

(i) The amount developed by the benefit formula as of termination.

(ii) The amount developed by applying the accrued voluntary contribution balance as a premium as of termination.

In lieu of any other benefit under the plan, a Member may elect to receive the sum of his contribution balances as of termination in one lump sum payment.

A person who has not completed 5 years of coverage is entitled to the sum of his contribution account balances.

### C. Normal Form

Partial Cash Refund Annuity payable from the Normal Retirement Date.

## 10. ADDITIONAL BENEFIT FOR PERS BENEFIT INCREASES

### A. Eligibility

Any employee who before July 14, 1995 was a Public Safety Member and whose last Severance of Employment occurred or occurs while the employee is a Public Safety Member and before January 1, 1991 for a reason other than death, or after December 31, 1990 for any reason. Effective May 6, 2013, these adjustments will only apply if the benefit will be subject to Oregon personal income tax.

### B. Amount

Upon distribution of an eligible member's Accrued Benefit, the amount of the distribution shall be increased by the option of (i) or (ii) below:

(i) The appropriate percentage from the following table:

| Months of Public Safety Employment (PSE) | Percentage |
|---|---|
| Less than 120 | 0.00% |
| At least 120 but less than 240 | 1.0% |
| At least 240 but less than 300 | 2.5% |
| 300 or More | 4.0% |

(ii) The resulting percentage from the following formula:

$$\left(\frac{1}{.91}\right) - 1 \quad \times \quad \frac{\text{Months of PSE before October 1, 1991}}{\text{Total Months of PSE}}$$

## 11. DEATH BENEFIT

### Pre-Retirement

If a Member dies prior to commencement of retirement benefits, his beneficiary will receive in one lump sum payment an amount equal to the sum of (i) plus (ii) below as of the date of death.

(i) The member's Account Balances.

(ii) For Public Safety Members, an additional benefit equal to the member's Required Contributions Account Balance (which consists of required after-tax employee contributions with interest).

## 12. EARLY RETIREMENT INCENTIVE BENEFIT

The plan was amended to offer eligible members an Early Retirement Incentive Benefit equal to $1,500 times the member's Years of Membership.

An eligible member is a Member (i) who is not an elected official of the County during May 2000, (ii) who is vested and has attained age 55 on June 30, 2000, (iii) whose severance of employment occurs on June 30, 2000 (August 31, 2000 for County's Public Works Office Manager), and (iv) accepts the Incentive Benefit offered by the County.

The Early Retirement Incentive Benefit will not be subject to a cost-of-living adjustment.

## 13. CONTRIBUTIONS

### A. Employer

Actuarially calculated.

### B. Employee Salary Reduction Pick-up

6.0% of Gross Compensation.

### C. Employee Voluntary

Each member may elect to make a monthly voluntary contribution. The maximum total monthly contribution which an employee may make (including any unit purchase contributions being made) is 10% of monthly earnings, but not less than $10 per month. An employee may elect to withdraw all or a portion of his accrued voluntary contributions balance not more than once each plan year.

## 14. RETIREE MEDICAL SUPPLEMENT

Members retiring after July 1, 1991 who have had eight years of membership are entitled to receive a supplemental benefit of $60 per month commencing at age 65. This benefit is intended, but not required, to be used for medical costs.

## 15. UNUSED SICK LEAVE BENEFIT

Members retiring after July 1, 1991 are entitled to 50% of the value of the Member's unused sick leave.

## 16. PLAN CHANGES

There were no plan changes since the last valuation.

**MORROW COUNTY**
**RETIREMENT PLAN**

## MEMBER INFORMATION

The current actuarial valuation was based upon the member data provided by the County.

The number of members included in the current actuarial valuation and the previous valuation are shown below. The following pages provide additional detail on these groups.

| | Prior Valuation July 1, 2020 | Current Valuation July 1, 2021 | Change |
|---|---|---|---|
| **Active Members** | | | |
| Public Safety | 24 | 18 | -6 |
| General* | 84 | 74 | -10 |
| Total Active | 108 | 92 | -16 |
| **Inactive Members** | | | |
| Vested Terminated | 25 | 28 | 3 |
| Non-Vested Terminated Entitled to Account Balance | 52 | 52 | 0 |
| Retirees and Beneficiaries | 68 | 75 | 7 |
| Total Inactive | 145 | 155 | 10 |
| **TOTAL MEMBERS** | 253 | 247 | -6 |

*Includes members categorized as General Non-Union Employees and Dispatchers.

**MORROW COUNTY**
**RETIREMENT PLAN**

**MEMBER STATISTICS**

| | July 1, 2020 | July 1, 2021 |
|---|---|---|
| Retirees and Beneficiaries | 68 | 75 |
| Total Monthly Benefit Paid From Trust* | $126,434 | $152,746 |
| Vested Terminated Members | 25 | 28 |
| Average Accrued Monthly Benefit | $1,172 | $1,371 |
| Nonvested Terminated with Account Balances | 52 | 52 |
| Total Account Balances | $200,080 | $209,720 |
| Active Members | 108 | 92 |
| Average Salary Rate | $61,470 | $64,844 |
| Average Age | 46.9 | 46.9 |
| Average Years of Membership | 9.1 | 9.4 |
| Covered Base Pay | $6,684,725 | $6,249,435 |
| Total Members | 253 | 247 |

** Includes $60 Supplemental benefits and excludes monthly benefits paid from previously purchased annuities.*

**MORROW COUNTY**
**RETIREMENT PLAN**

**SUMMARY OF ACTIVE GENERAL MEMBERS**
**(July 1, 2021)**

Years of Membership

| | Thru 4 | | 5 Thru 9 | | 10 Thru 14 | | 15 Thru 19 | | 20 Thru 24 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate |
| Under 20 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 3 | 60,860 | 1 | 52,605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 2 | 49,610 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 to 39 | 4 | 55,996 | 4 | 62,183 | 0 | 0 | 2 | 52,672 | 0 | 0 |
| 40 to 44 | 6 | 60,437 | 3 | 65,825 | 1 | 54,468 | 0 | 0 | 0 | 0 |
| 45 to 49 | 3 | 60,200 | 4 | 70,326 | 3 | 76,515 | 2 | 93,415 | 0 | 0 |
| 50 to 54 | 4 | 50,273 | 3 | 76,429 | 1 | 62,607 | 2 | 80,423 | 0 | 0 |
| 55 to 59 | 2 | 52,085 | 1 | 24,174 | 1 | 56,700 | 1 | 74,723 | 0 | 0 |
| 60 to 64 | 3 | 77,635 | 2 | 52,888 | 2 | 59,605 | 4 | 59,158 | 2 | 70,608 |
| 65 & Up | 1 | 50,575 | 0 | 0 | 1 | 56,700 | 0 | 0 | 1 | 65,637 |
| TOTALS | 28 | $ 58,491 | 18 | $ 63,298 | 9 | $ 64,359 | 11 | $ 69,489 | 3 | $ 68,951 |

Years of Membership

| | 25 Thru 29 | | 30 Thru 34 | | 35 Thru 39 | | 40 & Up | | All Years | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate |
| Under 20 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 58,796 |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 49,610 |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 57,806 |
| 40 to 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 61,456 |
| 45 to 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 73,190 |
| 50 to 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 65,383 |
| 55 to 59 | 2 | 65,352 | 1 | 75,983 | 0 | 0 | 0 | 0 | 8 | 58,307 |
| 60 to 64 | 1 | 62,607 | 1 | 62,607 | 0 | 0 | 0 | 0 | 15 | 64,064 |
| 65 & Up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 57,637 |
| TOTALS | 3 | $ 64,437 | 2 | $ 69,295 | 0 | $ 0 | 1 | $ 0 | 74 | $ 62,966 |

**MORROW COUNTY**
**RETIREMENT PLAN**

**SUMMARY OF ACTIVE PUBLIC SAFETY MEMBERS**
**(July 1, 2021)**

Years of Membership

| | Thru 4 | | 5 Thru 9 | | 10 Thru 14 | | 15 Thru 19 | | 20 Thru 24 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate |
| Under 20 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 |
| 20 to 24 | 1 | 48,321 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 to 29 | 3 | 57,489 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 to 34 | 1 | 56,064 | 1 | 61,811 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 to 39 | 1 | 74,724 | 2 | 62,895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 to 44 | 1 | 61,865 | 1 | 64,901 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45 to 49 | 0 | 0 | 0 | 0 | 1 | 82,383 | 1 | 105,143 | 1 | 90,826 |
| 50 to 54 | 0 | 0 | 1 | 68,207 | 1 | 74,724 | 0 | 0 | 0 | 0 |
| 55 to 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 to 64 | 0 | 0 | 0 | 0 | 1 | 105,143 | 0 | 0 | 0 | 0 |
| 65 & Up | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 113,844 | 0 | 0 |
| TOTALS | 7 | $ 59,063 | 5 | $ 64,141 | 3 | $ 87,417 | 2 | $ 109,493 | 1 | $ 90,826 |

Years of Membership

| | 25 Thru 29 | | 30 Thru 34 | | 35 Thru 39 | | 40 & Up | | All Years | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate | No. | Avg. Salary Rate |
| Under 20 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 48,321 |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 57,489 |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 58,937 |
| 35 to 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 66,838 |
| 40 to 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 63,383 |
| 45 to 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 92,784 |
| 50 to 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 71,465 |
| 55 to 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60 to 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 105,143 |
| 65 & Up | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 113,844 |
| TOTALS | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 | 18 | $ 72,567 |

## MORROW COUNTY
## RETIREMENT PLAN

## SUMMARY OF INACTIVE MEMBERS
## (As of July 1, 2021)

### Vested Terminated Members

| Age | Count | Average Account Balance | Average Estimated Monthly Benefit |
|---|---|---|---|
| Under 30 | 1 | $ 24,281 | $ 778 |
| 30 to 34 | 1 | 22,472 | 759 |
| 35 to 39 | 2 | 46,770 | 1,482 |
| 40 to 44 | 1 | 22,894 | 497 |
| 45 to 49 | 5 | 57,089 | 1,099 |
| 50 to 54 | 3 | 40,273 | 951 |
| 55 to 59 | 5 | 67,987 | 1,384 |
| 60 to 64 | 8 | 100,257 | 2,189 |
| 65 to 69 | 1 | 40,375 | 482 |
| 70 & Up | 1 | 13,258 | 130 |
| Grand Total | 28 | $ 63,038 | $ 1,371 |

### Non-Vested Terminated Members with Account Balances

| Count | Total Account Balance |
|---|---|
| 52 | $209,720 |

**MORROW COUNTY**
**RETIREMENT PLAN**

**SUMMARY OF RETIRED MEMBERS AND BENEFICIARIES**
**(As of July 1, 2021)**

| Age | Count * | Average Previously Purchased Monthly Benefit | Average Monthly Benefit Paid from Trust | Average Total Monthly Benefit |
|---|---|---|---|---|
| Under 50 | 2 | $ 0 | $ 3,750 | $ 3,750 |
| 50 to 54 | 0 | 0 | 0 | 0 |
| 55 to 59 | 5 | 0 | 1,744 | 1,744 |
| 60 to 64 | 12 | 0 | 3,430 | 3,430 |
| 65 to 69 | 20 | 0 | 2,176 | 2,176 |
| 70 to 74 | 14 | 134 | 1,841 | 1,975 |
| 75 to 79 | 9 | 37 | 1,799 | 1,836 |
| 80 to 84 | 8 | 157 | 788 | 945 |
| 85 to 90 | 5 | 493 | 716 | 1,209 |
| 90 & Up | 0 | 0 | 0 | 0 |
| TOTALS | 75 | $ 79 | $ 2,037 | $ 2,116 |

*Includes retirees that took a lump sum distribution of retirement benefit but are eligible for $60 supplementary benefit.

**MORROW COUNTY**
**RETIREMENT PLAN**

## RISK DISCLOSURE

The purpose of this section is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's members.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these likely differences when making decisions that may affect the future financial health of the Plan, or of the Plan's members.

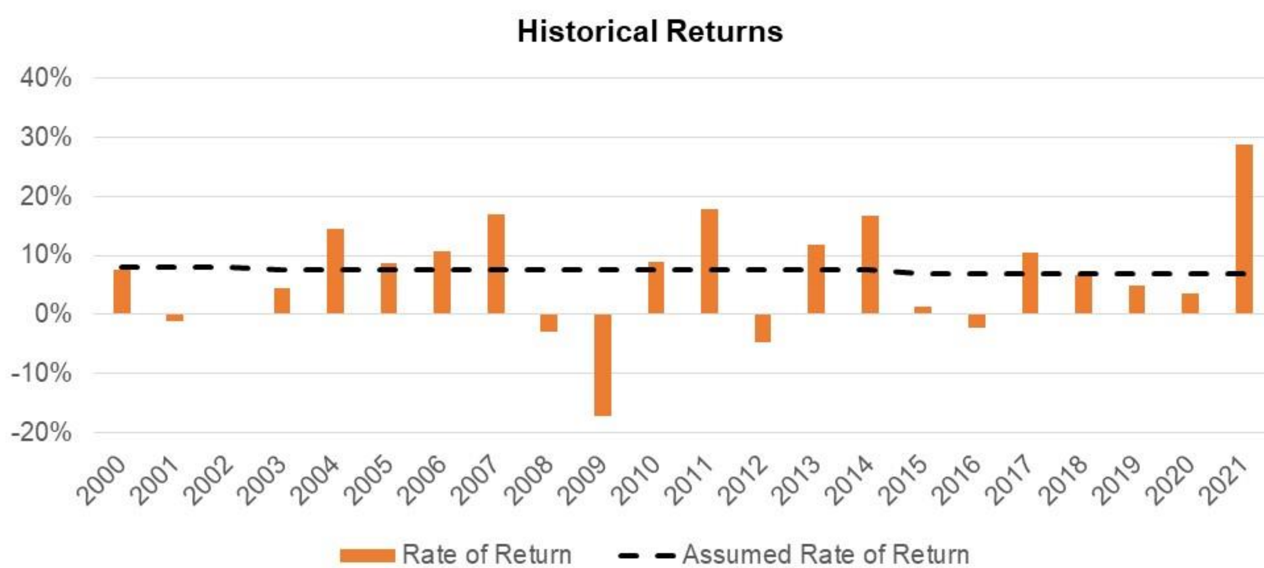
The information below is intended to identify and assess risks that are most likely to significantly affect the Plan's future financial condition and is intended to satisfy the requirements of Actuarial Standard of Practice No. 51 (ASOP 51).

### Investment Risk

Investment risk is the potential that investment returns will be different than expected.

To the extent that actual investment returns differ from the assumed investment return, the Plan's future assets, funding contributions, and funded status may differ significantly from those presented in this valuation. In particular, if the Plan's investment returns are generally lower than assumed over time, additional funding would be needed compared to that implied by this valuation. The current assumed investment return is 7.0%.

The annualized return for the Plan's assets has been about 7.4% over the last 10 years, and about 6.5% over the last 20 years. More detail on the Plan's investment returns since the plan year ending June 30, 2000 is shown in the chart below.



The Plan's liabilities have been calculated using a discount rate equal to the assumed net investment rate of return of 7.0%. One way to assess the effect of possible future investment return different than assumed is to consider the effect of changing the discount rate. As a general rule, using a lower discount rate results in higher pension liability, and vice versa. If the discount rate were to decrease (increase) by 100 basis points, the estimated increase (decrease) in pension liability would be about 12%.

**Longevity Risk**

If Plan members live longer than predicted by the actuarial valuations of the Plan, additional future funding beyond what has been determined by the actuarial valuations will ultimately be required for the Plan to pay benefits. These assumptions should continue to be monitored in the future.

**The Impact of Plan Maturity**

A pension plan's ability to recover from any underfunding and to respond to any poor experience resulting from the risks described above is significantly affected by its "maturity" level. As a plan's assets and liabilities grow, the impact of any gains or losses on the assets or liabilities also becomes larger.

**Liquidity Risk**

Liquidity risk is the potential that assets must be liquidated at a loss earlier than planned to pay for the Plan's benefits and operating costs. This risk is heightened for plans with net negative cash flow or with large lump sum payments.

**Insolvency Risk**

If the actuarial assumptions are met in the future and Morrow County continues to follow the funding policy, the expectation is that the Plan will remain solvent. If at some point in the future the County is unable to make these contributions, the Plan could become insolvent. We are unable to assess the future ability of the County to make future contributions as recommended by the actuarial valuations of the Plan.